

THE GHOST OF NAPOLEON

BY THE SAME AUTHOR



THE REAL WAR, 1914-1918
THE BRITISH WAY IN WARFARE
THE FUTURE OF INFANTRY

THE
GHOST OF NAPOLEON

BY
LIDDELL HART

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To
'T.E.'
who trod this road before 1914

NOTE

The main historical theme of this book was set forth in the Lees Knowles Lectures for 1932-33 delivered at Trinity College, Cambridge, under the title— 'The Movement of Military Thought from the Eighteenth to the Twentieth Century, and its influence on European history' . The final chapter has been added subsequently, together with various interpolations in the earlier chapters.

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Prologue

The influence of thought on thought is the most influential factor in history. Yet, being intangible, it is less perceptible than the effects of action, and has received far less attention from writers of history. We recognize that it is man's capacity for thought that has been responsible for all human progress. But, even yet, we do not fully show our recognition of this cardinal fact, either in the treatment of contemporary affairs, or in the treatment of the past.

It is true that the great philosophers or poets whose recorded thoughts have continued life fill a larger place in the mind of posterity in proportion to their number than the host of conquerors and kings, who, while they were on the stage, attracted a much wider acclaim. But men of thought who produced ideas of a more concrete nature, whose thoughts more directly influenced the course of history, have been comparatively overlooked. And their influence on events has not been studied with a due sense of proportion.

In the case of material appliances we justly regard the inventor as on a higher plane than the manufacturer. But historical justice is rarely done

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to those who conceive new mental appliances that have a wider effect on the destiny of peoples. Here the attention of history is usually focused on the manufacturer or distributor, a commercial standard of historical values which contrasts strangely with history's indifference to actual men of commerce.

Yet reflection should surely awaken us to the historical importance of those who have moulded the minds of the men whose actions have moulded history. It is commonly argued that the latter class, the men who possess the power to act, 'deserve the credit on the score of their responsibility. Without denying the force of this argument, I think that it has been given a disproportionate value. My own study of the past, as well as my observation of contemporary history, has increasingly impressed me with the importance of pure opportunity in the success of those who wield power. Such accidents of fortune have a much smaller significance in the case of those men who propagate new ideas, or methods, and inspire action. They prepare the mind not only of the man who will eventually use their ideas, but of the men he will use.

I do not underrate the importance of responsibility, or of receptivity, but I urge what seems to me a truer sense of proportion in the judgment of history. If the balance has been faulty, the cause may lie in the difficulty of gauging the influence of thought on action.

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But there is certainly one realm of action where that influence, and its consequences, can be traced with a reasonable degree of accuracy. This is the realm of warfare. The inspiration of new ideas and the introduction of new methods in military organization, strategy, and tactics, have played a part that is quite as significant as the feats of executive military genius, if far less emphasized. In classical and mediæval warfare, unfortunately, we have few clues to establish the chain of causation.

But it is certainly possible to trace two movements of thought—as well as their chief creators—which in turn have vitally affected the course of history in the last two centuries. For one movement was, to a great extent, responsible for the triumphs of Revolutionary France and for Napoleon's Empire, while the other bears a direct responsibility for the ruinous cost and negative nature of the War of 1914-1918. And a significant, if less direct, responsibility for bringing about that war.

*Generation**The Military Renaissance of the
Eighteenth Century*

THE years that followed the War of the Spanish Succession appear to have been strangely barren of military thought. That war, a 'European War' in its scope, had produced more great generals than most great wars. But they were content with practice, and they found no great interpreters to develop a theory from *their* experience. There was no comprehensive effort to analyse the lessons of that long-lasting and many-sided war.

Some of the essence of its best leadership is certainly distilled in the pages of Feuquières, but the bareness of the military cupboard is shown by the prominence of the Chevalier Folard, whose commentaries on Polybius (1727) became and remained perhaps the most-discussed books on war during the first half of the eighteenth century. It is still more significant that the parts of his teaching which focused the attention of soldiers were his proposals for an attack formation in massive columns sixteen to thirty-two ranks deep, a crude revival of the

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Greek phalanx. For this trend of interest helps to show how predominantly the military mind of the period was occupied with the *mechanism* of formations—the details of the order of battle. But it also shows the strength of the classical tradition. Here is a key to the understanding of military science in the seventeenth and eighteenth centuries.

The nature of armies is determined by the nature of the civilization in which they exist. Heredity may appear to influence more than environment because they have usually offered a stout resistance to change. But the pressure of environment is sure, although its effects may be slow to appear because of the time lag that is habitual in armies.

The Renaissance did not really begin to affect the military world until the seventeenth century. It possessed the military world in the eighteenth century.

The greatest military pioneer of the seventeenth century was Gustavus Adolphus, and he lives in history as the creator of the first 'modern army'. But if we examine his tactical formations, which more than any art were the secret of his success, we can trace his adaptation of the Roman legion and its manœuvrable maniples. We know, too, on his own evidence how much he prized the teaching of Xenophon, than whom no man has had more influence on the history of the world; if influence on the minds of the makers of history be the gauge. The Cyro-

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pædia was for Gustavus his military bible as it had been for the greatest captains of the ancient world, and as it would be for some who followed. It was Wolfe at Louisburg who, when one of his officers remarked that the way he was using his Light Infantry recalled the tactics of the *καρδουχοι*, candidly replied: 'I had it from Xenophon, but our friends here are astonished at what I have done because they have read nothing.'

The Classical influence reached its peak in the eighteenth century. It was beneficial in so far as it led soldiers to imbibe the bottled wisdom of the Greek and Roman masters. But it too often produced an intoxication. Folard's endeavour to revive the phalanx ignored not only the historical fact of Cynoscephalæ, but the modern fact of the bullet. Yet a generation later his folly was revived and raised a storey higher by Mesnil-Durand, who proposed a massive and unarticulated battalion column, thirty-two ranks deep with a front of only twenty-four men. His arguments made many converts, and even attracted so intelligent a soldier as the Duc de Broglie.

The issue became confused, because some of the best tacticians favoured the column in a more flexible form, for manœuvre, while seeing its defects for shock. Their views ultimately prevailed, and in a modified form the column was incorporated in the drill book of 1791, which remained the tactical

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regulations of the French Army for over forty years—throughout the Wars of the Revolution and the Empire. Whence, as catchwords become fixed in military minds that are cast in the mould of convention, we may, with some justice, trace back through Folard to antiquity the source of French defeats in the Peninsula at the hands of the ‘thin red line’. If so, as Englishmen, we have additional cause for remembering our ‘debt to Greece’. More palpable still as evidence that Folard had not preached in vain is the famous example of Macdonald’s massed column of 13,000 men at Wagram, which shrivelled to a handful by the time its advance petered out.

But the debt to Greece, and the influence of classical military ideas upon the history of the eighteenth century, is most manifest of all in Frederick’s celebrated ‘oblique order’—that flank approach by which he concentrated his strength against one of the enemy’s wings while withholding, or in military language, ‘refusing’ one of his own. In copying this manœuvre from the classics, Frederick scarcely did justice to his masters. At Kolin his oblique march had an obviousness that brought upon it well-deserved disaster. And if Leuthen may be adjudged superior to Leuctra, where Epaminondas produced the original model in 371 B.C., it was lacking in the preparatory art that Epaminondas had displayed in his second attempt, at Mantinea. Still less did it equal the consummate

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subtlety of Scipio's compound oblique manœuvre at Ilipa.

The significance of Frederick's classical revival lies not in the science, but in the art of war. For the success of his generalship he owed more to his *coup d'œil* than to his conceptions. But the military world of his time, dazzled by his successes, sought their secret in his tactical forms rather than in his tactical eye. And because his forms had so marked a pattern they made the deeper imprint.

Foreign armies hastened to imitate them, the Prussian preserved them as a sacred trust. And thus it came about that the burden of Frederick's debt to Greece fell upon the generations that followed. The British Army paid in several instalments, from which the Americans were the first to draw the interest. But the Prussians, if they were later in paying, paid more heavily—from Valmy to Jena. And it was France which drew the profit, first in preserving the Republic and then in the enlargement of the Empire.

Thus it would be possible to record these results, so fateful for history, as a debit due to the borrowing of classical forms. In the balance sheet of history, however, credit must be given to the new military thought which developed in France during the second half of the eighteenth century.

The military triumphs of the Revolution, and the military revolution, were due not merely to the

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static traditionalism that acted as a brake on the opposing armies, but to a positive movement of military thought that eventually found its vehicle in new conditions of mobility. If the Revolution assembled the motor, from parts of earlier manufacture, military thought was the petrol. And this came from pre-Revolutionary wells.

1. The Sterile State

To understand the development of this thought we must picture the conditions of warfare at the time. The features of the eighteenth century that first strike the historical observer are the rareness of battles and the indecisiveness of campaigns. But the cause was misunderstood by military students of the nineteenth century. They viewed pre-Napoleonic practice through the glasses of a post-Napoleonic theory that was itself to produce indecisiveness through ignoring the actual conditions of warfare. But in the days of their study the hour of disillusioning experience was yet to come.

Thus, nourished on the theory of Clausewitz, they ascribed the relative ineffectiveness of eighteenth-century generalship to a wrong mental attitude. They derided it for fencing instead of fighting. And they found a convenient explanation in the difference between the modern war of nations and the old war of princes—contending for dynastic aims on a limited-liability basis, and employing an

The Sterile State

expensive professional army instead of a conscript levy.

If there is some truth in the charge, and some also in the explanation, this view exaggerated the unwillingness of pre-Napoleonic generals to risk battle. It was not true of the few great leaders, who stood out from the ruck of noble-born mediocrity. No general could have set his mind on a decisive battle more eagerly than Condé in 1645, or shown more disappointment when he conquered a province without winning a victory. In six campaigns he fought only four battles. Turenne anticipated Napoleon in his maxim that a victory in the field was worth more than any number of captured fortresses. Turenne's great opponent, Montecuculli, forestalled Clausewitz—and Foch—when he declared: 'It is a paradox to hope for victory without fighting. The goal of the man who makes war is to fight in the open field to win a victory.' Yet these two men, pitted against each other, consumed two campaigns without bringing off a battle.

It is true that the great pre-Napoleonic leaders did not believe in fighting a battle without the advantage, without a reasonable assurance of victory. Here, perhaps, they differed from the generals of this last half-century, intoxicated with the blood-red wine of Clausewitzian growth. But the hindrance to a battle did not disappear when success was assured even without the need of securing a

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preliminary advantage. This happy state was Marlborough's after Ramillies, as Trevelyan vividly brings out. And Marlborough's thirst for battle would have earned the admiration even of a Foch, had he ever studied him. In practice, moreover, Marlborough pressed the idea of 'absolute War' beyond the theory of a Clausewitz, giving the world an unheeded object-lesson in what Trevelyan aptly calls 'concentration of purpose on an impossible object'—that of compelling Louis XIV to concede the one rejected demand out of the forty presented to him.

Yet even Marlborough only managed to fight four battles in ten years of warfare. The fears and jealousies of his Dutch allies are not a sufficient explanation of a condition that was common to generals who served such a single master as Richelieu or Louis XIV, as well as to generals who, like Frederick, were their own master.

The cause of the condition must be sought in the military conditions of warfare. Battle implies mobility, strategic and tactical. The army which seeks to fight another must be able to move quickly against it. On the battlefield the troops must be able to move forward in face of the enemy's fire. Once the issue is decided, the army must be able to follow up the beaten enemy, and complete the victory. Battle also implies the *immobilization* of the enemy—the paralysis of his powers of movement so

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that, in the first place, he may not be able to slip away, and second, that he may not be able to counter your strokes.

These conditions of success were limited, if not lacking, in eighteenth-century warfare. Roads were little better than tracks, if wider than what we now term a track—often as wide as the modern arterial road, so that, instead of marching in threes or fours, the troops marched ten or twelve abreast. Rapid movement along such trackways was difficult, and all the more so because of the cumbrous formations of the time.

But a still greater handicap was the difficulty of feeding the army while in movement. It is proverbial that an army marches on its stomach. The normal eighteenth-century army could only wriggle on its stomach—because it was fettered by a chain of magazines. Supplies were accumulated in these magazines before a campaign opened, but transport from them to the field army was so awkward and slow that only a short radius of movement was possible, at least until the chain had been extended by creating and filling a new magazine. An increased humanity in the conduct of war also helped to increase the dependence of armies upon magazines. The locust hordes of the Thirty Years War were a grim legend, and the practice of living on the country was contrary to the custom of a more civilized age. But in any case there were few tracts

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of country capable of supporting a large army, closely concentrated, unless it passed quickly onwards. And this was difficult—not only because of bad roads, but because of strong fortresses.

The strength of fortresses at this period owed much to the progress made in the science of fortification. But it owed as much to the natural difficulties of movement. Each of these checks reacted upon the others, increasing the obstruction. A slow-moving army was inevitably dependent upon magazines, and a magazine-chained army could not easily avoid the fortresses which grew up at all important road-centres or other strategic 'defiles'. Moreover, the attack upon fortresses became more difficult with the improvement of fire-weapons.

Here was yet another brake upon decisive battle. When within sight of each other, the threat of fire was already tending to keep armies apart more than in the old days, when shock weapons predominated. In the approach to a battlefield, fortresses often blocked the way, and because of the lengthening range of their armament they not only made the attack more hazardous, but compelled a larger force to be used in forming this circle of investment, so reducing the strength of any army that tried to pass on and seek victory in the field. Another vicious circle.

Fortresses likewise, together with bad roads, cumbersome formations, and magazine-chained armies,

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hindered the exploitation of a victory and the reaping of its fruits.

These compound checks on mobility gave to the defensive in the eighteenth century a supremacy that was restored to it in the twentieth century by the machine-gun and the cumbrous size of armies. The difference, however, was that, in the eighteenth the brake on strategic mobility was greater than on tactical, whereas in the twentieth the reverse has been true.

But an even greater hindrance to battle in the eighteenth century was the incapacity of armies to paralyse their enemy's mobility. They lacked means of making him stand and fight. If he disliked the prospect or deemed the situation unfavourable, he could too easily slip away—and retire behind a fortified barrier. Thus battles, usually, were by mutual consent. They could rarely be brought about unless both sides were willing, and this implied such equality that neither side was likely to risk battle.

2. The Block System

The incapacity of armies to force battle upon an unwilling foe was due, above all, to their own order of battle. The idea that an army should be drawn up in a rigid line of battle, normally with the infantry massed in the centre and the cavalry on the wings, had become fixed by the custom of centuries.

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In the days when shock weapons predominated, this rigid formation had the virtue of solidity. But like most military practices it persisted long after its value had declined and its handicaps had increased. So long as it persisted it meant that an army was a limbless body, or, at best, a trunk with short stumps. This state restricted an army's power of manœuvre and distraction.

The strategic handicap suffered by pre-Napoleonic armies was even greater than the tactical. Custom ordained that they should move, as they fought, in a solid block. That custom had its foundation in a common-sense appreciation of the value of concentration. Detachments not only weakened the main body, but were themselves in ever-present danger of being overwhelmed while isolated. In the days of shock weapons the clash of forces was abrupt, and a small detachment could only offer a brief resistance, unless it found shelter behind a wall or other obstacle. And because of their defencelessness in the open, detachments tended to become static. Instead of actively contributing to the purpose of the main body, they were apt to become locked-up capital. It was only as fire power developed and weapons lengthened in range that such detachments extended their time of resistance—and acquired the power of pinning down a stronger force by attack.

But to recognize the past necessity of being phy-

The Block System

sically concentrated should not blind us to the way this 'block system' handicapped the commander. Each army was a single piece on the chessboard of war. And the comparison with chess may help us to realize the difficulty of cornering an opponent when only two pieces exist on the board. If the prolonged manoeuvres of eighteenth-century warfare appear artificial, more like a match at chess than the 'impassioned drama' of nineteenth-century warfare, the conditions rather than the players were to blame. •

It is in the light of these conditions that we should observe the movement of military thought—which was a vital factor in preparing the change of conditions that the French Revolution completed. Because the change originated in France we must, above all, examine French military thought, which was also the most active of all.

3. The Man who Cleared the Way

At the beginning of the century Feuquières had proclaimed the sovereign efficacy of battle with an emphasis to which its impassioned advocates in the next century could add little. The difference between him and them lies mainly in the cool discrimination with which he points out the conditions for a profitable offensive, and the cases where the pursuit of battle is unwise. But he declared that 'a battle at the outset of a war, delivered with purpose,

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almost always decides the issue'. And again that, even where the enemy's strength compels a defensive or waiting attitude, a general 'should be continually on the alert to procure the superiority by small gains, so that he will ultimately arrive at his goal, which is the ruin of the enemy army'.

The man who wrote this might equally well have written any modern Field Service Regulations. And in the pages of Bosroger, a successor, we catch the very keynote of the 1914 apostles of the *offensive à outrance*—'offensive war requires a vigorous opening to astonish the enemy and to spread alarm among his troops and in his country; one is half-way to victory when one has succeeded in inspiring terror in him. He must be given no chance to recover from it.'

Yet, in actual practice, we find that these precepts were rarely translated into fact. Contact with the conditions of war sterilized them, as in 1914, with only the difference that the generals of an earlier age did not pursue a fallacy so far—in vain expenditure of life.

The reaction of experience is to be seen both in the practice and in the theory of Marshal Saxe—as contained in his *Reveries*, published in 1757. Saxe not only typified the mind of eighteenth-century generalship for nineteenth-century students, but deserves to be considered first in the chain of thought that culminated in Napoleon. This com-

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ment would have seemed a paradox to Foch, to whom the two were as the poles apart. For Foch, in his condemnation of the old 'fencing' and 'anti-quated methods' of pre-Napoleonic war, singled out for ridicule Saxe's saying, 'I am not in favour of giving battle, especially at the outset of a war. I am even convinced that an able general can wage war his whole life without being compelled to do so.' In shining contrast, Foch pointed to Napoleon's remark, at the outset of the Jena campaign—'There is nothing I desire so much as a great battle.' In biting comment upon the comparison, Foch wrote—'The one wants to avoid battle his whole life; the other demands it at the first opportunity.'

But here Foch seized upon a vivid phrase, divorced from its context and even misquoted. He failed to understand that Saxe was arguing that a good general should not be cornered, and forced to fight at a disadvantage. He ignored Saxe's contention that instead of risking a ranged battle, where equality of strength gave uncertainty to the issue, good generalship should first weaken and upset the enemy 'by frequent encounters'. It is a very important omission, for here Saxe suggested as a campaign method what Napoleon fulfilled in a new form of battle that corresponded to the old campaign, if more concentrated in time and space.

Foch also ignored Saxe's express qualification:

'I would not be understood to say that an oppor-

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tunity of bringing on a general action, in which you have all imaginable reason to expect the victory, ought to be neglected; but only to insinuate that it is possible to make war without trusting anything to accident—which is the highest point of skill and perfection within the power of a general.’ Saxe was a supreme artist of war, hampered by difficult conditions. Yet his own record exhibits several great battles, all victories. The true measure of his thought, and his lesson for posterity, was contained in this maxim—‘Decline the attack altogether unless you can make it with advantage.’ We know that it was not heeded by the generals who were bred in the nineteenth-century French school of war. We know also that they did not understand the real conditions under which Saxe had fought, nor foresee those under which they themselves were to fight.

If there was a difference between Saxe’s outlook and Napoleon’s, with results that can be seen in history, there was no such contrast as Foch implied, and the difference was largely due to a difference of military conditions—if also to the intoxication of success to which Napoleon gradually succumbed. But Foch’s delusion was due to the intoxication of hero-worship. Foch and his fellows would be the culmination of a swing of the pendulum from an extreme that Saxe had never reached to an extreme that Napoleon had never contemplated. In singling out Saxe’s theory as the reverse of Napoleon’s

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practice Foch betrayed the shallowness of his own historical knowledge.

Saxe was rather the pioneer of the Napoleonic way. And certainly never more so than in breaking with custom in his teaching upon pursuit—‘The maxim that it is most prudent to suffer a defeated army to make its retreat is very religiously observed; but is nevertheless founded upon a false principle. For you ought, on the contrary, to prosecute your victory and to pursue the enemy to the utmost of your power; his retreat, which before perhaps was regular and well conducted, will presently be converted into a complete rout.’

But it was in opening the way to a decision that Saxe best showed his practical originality. He clearly perceived that the distraction of the enemy was an essential prelude to any decision. In war, as in wrestling, the attempt to throw an opponent without loosening his foothold and balance tends to self-exhaustion—and stalemate. Saxe turned his mind to the problem of upsetting the opponents’ mental and physical balance—of dislocating their plan and the organization of their forces. In an age of regularity he introduced irregularity as a lever. In an age of immobility he laid the foundations of mobility. In an age of convention he showed more freedom from convention—and more of the scientific spirit of enquiry—than any of the generals of the Revolution, who enjoyed the freedom that it gave.

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They profited; he prophesied.

He was perhaps fortunate to be not only Maurice of Saxony, but the most successful in action of all the marshals of the century. He was perhaps discreet in withholding publication of his *Reveries* until after his death. Because his manner of criticism, however justified, can hardly have been welcome to his contemporaries.

For in his Preface he remarked: 'war is a science so obscure and imperfect' that 'custom and prejudice, confirmed by ignorance, are its sole foundation and support. All other sciences are established upon fixed principles . . . while this alone remains destitute; and so far from meeting with anything fundamental amongst the celebrated captains who have written upon this subject, we find their works not only altogether deficient in this respect, but also so involved and undigested that it requires very great gifts, as well as application, to be able to understand them; nor is it possible to base any judgment upon history, where everything on this subject is utterly the product of caprice and imagination.'

Nearly two centuries have passed since Saxe wrote thus and, although the study of war has immensely developed, war still waits to be studied as a science. Staff Colleges have been founded, where the history of wars is taught as a supplement to the main purpose—the training of staff officers; but the study of military history remains superficial, and is

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rarely conducted in a scientific spirit, detached from traditional loyalties and prejudices. To breathe freely, that spirit needs the atmosphere of a university, where superior rank and uniformity of doctrine do not exist to check the expansion and expression of thought.

An ill reception would certainly befall the modern soldier-student who dared to suggest that the official doctrine of an army was still formulated in the traditional way that Saxe derided when declaring that it arose from 'having blindly adopted maxims, without any examination of the principles on which they were founded; . . . our present practice is nothing more than a passive compliance with received customs, to the grounds of which we are absolute strangers.'

In seeking to rescue his successors from the bondage of convention he saw that the conditions which produced immobility must first be remedied. And he saw most, if not all, of the ways in which to remedy them, although not all his remedies were applied even in the Wars of the Revolution. Some of them waited until far on in the War of 1914-1918, and others are only now receiving consideration.

Saxe understood, like Napoleon later, that rapidity of movement, security of movement, ease of manœuvre, and efficient supply are the primary conditions required for mobility. And to these objects his proposals were directed. In his dictum

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that 'the whole secret of manœuvres and of combats lies in the legs', he forestalled Napoleon's more familiar saying that his victories were won by the legs of his soldiers. It is by no means the only epigram that Napoleon appears to have borrowed from the writers he studied.

Saxe also saw, like Sherman a century later, but in contrast to Napoleon and the Napoleonic school, that there is a limit, determined by mobility, to what one may call the *economic size* of an army. And that the effective strength of an army ceases to increase when its numbers cause a decline in mobility. Saxe's ideal army—in view of the conditions of his day—was one of just under fifty thousand men, and he declared that 'a general of parts and experience commanding such an army will be able to make headway against one of a hundred thousand, for multitudes serve only to perplex and embarrass'.

The same idea of economic size is manifest in his objection to the practice of fortifying towns, and his preference for utilizing the 'works of nature, which I look upon as infinitely stronger'. Moreover, fortified towns, he points out, require an excessively large garrison and mean too many useless mouths to feed. The inflow of refugees, always an incalculable quantity, causes their capitulation to hunger long before their military resistance power is broken. Saxe advocates that natural barriers should be fortified instead. 'Yet I am conscious there is hardly a

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single person who will concur with me, so prevailing and so absolute is custom.'

In dealing with fortifications, their construction, attack and defence, Saxe was distinguished equally by his mastery of the subject and by his grasp of its restricted purpose—his mind transcended the limitations of that earlier age of siege-warfare. And his inventive powers enabled him to produce schemes so ingenious and yet so reasonable that, as he justly claims, they would 'diminish that rage for sieges which prevails at present'.

For him, fortification was only a means to advantageous battle, a sponge to absorb the enemy's force with small diversion of his own. With this idea he gave particular attention to field fortification. His use of redoubts, situated to break up the enemy's attack and embarrass them in pushing forward reserves, bears a striking likeness to the 'pillboxes' and strong points that hampered the British advance at Passchendaele in 1917. Equally prophetic was the disposition of his protected batteries to fire obliquely to a flank instead of to their front—for these intersecting rays of enfilade fire formed one of the most notable developments of the World War. His redoubts and his oblique fire were not merely a matter of theory, for at Fontenoy and Lauffeld the British troops suffered a foretaste of these modern devices.

In seeking means to free himself from the prevail-

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ing immobility Saxe saw, first of all, the need for an instrument of mobility. Art alone could not suffice, unless the artist was possessed of a suitable tool with which to carve his design. Hence he made the reorganization of the army the basis of his new developments in tactics and strategy. Here he stands out from almost all the masters of the art of war, who have been content to use the tools that came to their hand and have shown an astonishing neglect to make changes that would have doubled their own effectiveness.

In none is this neglect so marked as in Napoleon, who, despite the vital advantage he drew from changes that took place just before his rise to power, did practically nothing towards extending those reforms. He was content to continue with the tactical mechanism—the formations and evolutions—that he inherited. He was content to leave undeveloped the opportunity of introducing new armament and equipment, that might have compensated the shrinking quality and quantity of his human material.

He even disbanded in 1799 the French Balloon Corps formed five years earlier, which in earliest infancy had rendered invaluable service in the operations subsequent to the battle of Fleurus, especially around Gosselies. If Napoleon had not stifled the babe, there is every likelihood that on its twenty-first birthday in 1815 it might have saved

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him on that very spot.

It is reasonable to suggest that air reconnaissance might have disclosed to Ney the weakness of Prince Bernard's detachment at Quatre Bras on June 15th, and prompted him to seize this key point, gaining an important initial advantage for Napoleon. Even if Ney had missed this opportunity, he would hardly have wasted so many hours on the 16th in passivity while Wellington's reinforcements were marching thither. And if he had captured Quatre Brâs during the morning, when its capture was so easy, he would have had no reason in the afternoon to call back d'Erlon from his march to Ligny. In that case d'Erlon would have been able to fulfil his mission, of giving the death-blow to Blücher on the field of Ligny, instead of oscillating ineffectively between the two battlefields. But if the improbable had come to pass yet a third time, and Blücher had been allowed to make good his retreat from Ligny, it is more than probable that on the morning of the 17th balloon observation would have shown that he was retreating northwards, not eastwards. If so, Grouchy, instead of wandering off 'into the blue', would have had every chance of preventing Blücher from moving to Wellington's help at Waterloo, and Wellington could have been crushed at leisure. Perhaps he might never have reached Waterloo, for he was only able to fight there on the 18th because he was allowed to slip

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away from Quatre Bras on the 17th behind a screen of cavalry.

The mistakes due to an obscure situation, that ruined Napoleon in the Waterloo campaign, form perhaps history's supreme revenge on a man for lack of vision. No man has ever more surely, or more literally, closed his own eyes. This fatal example of conservatism was, however, characteristic of Napoleon's general attitude to the question of army organization, and is the more remarkable in view of his unrivalled chances of making changes. Its particular significance for our present study is that, by implication, it strengthens any evidence that Napoleon was indebted to his forerunners for the new ideas that are linked with his name—that he took, but did not create.

Saxe, in contrast, produced more than the military system could assimilate. The experience of the twentieth century was needed before the full significance of his proposals appeared. He was typical of his time in seeking guidance from the classics, but he went to them for inspiration, not merely for imitation. Impressed with the wonderful adaptability and manoeuvrability of the Roman organization under Scipio—like tempered steel in its strength and flexibility—Saxe based his system upon it. His infantry were to be formed in legions, each of four regiments; and each regiment of four 'centuries' with a half-century of light infantry and a half-century of horse.

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For the latter he invented 'a suit of armour, consisting of thin iron plates fixed upon a strong buff skin, the entire weight of which does not exceed thirty pounds'. And he claimed that this was at least proof against bullets that were not fired point-blank or were not well rammed down. 'By arming your cavalry in this manner they will rush upon the enemy with irresistible impetuosity . . . from a consciousness of their own security . . . and how can those whose bodies are quite unguarded be able to defend themselves against others who are, in a manner, invulnerable?' By his argument even more than by his invention Saxe has claims to a place among the forefathers of the World War tank. His full reasons for the revival of armour could hardly be improved upon, and only the petrol motor was wanted to crown them. He even forestalled the objection that in these days is raised against the demand for mechanization—'To say that the enemy will adopt the same measures is to admit the goodness of them; nevertheless they will probably persist in their errors for some time, and submit to be repeatedly defeated, before they will be reconciled to such a change—so reluctant are all nations to relinquish old customs.' Saxe, certainly, possessed a clear historical sense.

Saxe's infantry were 'to be furnished with bucklers of leather, prepared in vinegar', with which 'they may form a kind of parapet in an instant . . .

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two of them, the one upon other, being musket-proof'. In a form suited to the weapons of his day, Saxe here conceived the type of mobile breastwork which the troops of Sherman and Lee became so adept in raising during the American Civil War.

He was, again, long in advance of his time in condemning the 'method of firing by word of command, as it detains the soldier in a constrained position, and prevents his aiming with any exactness'. It is equally notable that all Saxe's infantry, not merely his light infantry, were to be armed with breech-loaders. A century passed before the military world was brought to his views. The significance of that delay is suggested in the verdict of the Confederate General, E. P. Alexander, that 'had the Federal infantry been armed from the first with even the breech-loaders available in 1861 the war would have been terminated within a year'.

The light infantry in Saxe's organization were to be armed with a breech-loading fowling-piece, and this equipment was to be as light as possible. They were to be exercised continuously in jumping, running and 'firing at a mark at three hundred paces distance', and competition was to be introduced as a stimulus to their training. In fact, what Saxe proposed was similar to those 'reforms' in the training and equipment of infantry which have been initiated in the British Army during the past year! So, in principle, are his dress-reform proposals.

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As regards the organization of the infantry regiment Saxe foreshadowed the four-company system—which was only adopted in the British Army on the eve of 1914! Similarly, his line of centuries, with an irregular frontage and intervals between them to facilitate manœuvre, seems to have been inspired by the same idea that gave birth to the infiltration tactics of 1918. It has certainly more connection with the most modern formation in a chain of combat groups than with the rigid lines of his time, so easily disordered, or even the continuous 'waves' of 1916.

In the attack, the light infantry were to form an advanced and dispersed line along the front of the regiment, opening fire when the enemy were some three hundred paces distant, and at the last moment falling back into the intervals between the centuries, which would be advancing to the charge. This shock, Saxe calculated, would practically coincide with the cessation of the skirmishers' fire upon the hostile ranks, and thus would allow the enemy no time to repair the inevitable disorder.

If in some of his previous proposals Saxe has appeared the prophet of a distant future, he here becomes unmistakably the parent of the near future—of the tactics that the Armies of the Revolution employed. His skirmishers, like theirs, were to fulfil the role of preparing the attack. They were to be the agents of that *disorganization* which must

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be created before a decision can be obtained.

In the War of the Austrian Succession (1739-48), the Austrians had enlisted bands of wild Croats and Pandours, which proved a thorn in the side of the enemy's stiff-ranked regulars, if scarcely less in their own side—because of their undisciplined ways. The quick perception of Marshal Saxe had grasped the military value that their unmilitary habits concealed. It led him to add corps of light troops to his own army in Flanders; at Fontenoy and at Lauffeld they rendered valuable service. And in subsequent reflection on the lessons of this war he evolved the system set forth in his *Reveries*, by which highly trained skirmishers were to produce the fire that opened the way for the assaulting troops. These would form eight deep for the charge, to provide momentum and continuity of effort as well as the moral momentum that comes from the feeling of being closely supported. To this extent, purely for the charge—the charge *through*, rather than the charge *against*—Saxe made a modified use of Folard's column theory.

Frederick the Great was also led, in the Seven Years War that followed, to raise light troops because of the trouble caused him by the Croats and Pandours. But he seems to have used them merely to neutralize the enemy's light troops, and did not utilize their potential value in preparing the assault—although he waged this war after Saxe was dead

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and the *Reveries* had been published. He continued to rely on the fire of his infantry line, if supplemented increasingly by a massing of artillery, and by this reliance paved the way for the disasters that befell the stiff Prussian lines two generations later.

In France, however, Saxe's system survived, although temporarily submerged by a wave of Prussian imitation after 1763. Its emergence was helped by the enthusiasm for light infantry acquired by officers who had taken part in the American War of Independence and had seen the success of colonial guerillas against the drill-deadened British regulars, then suffering from tactical 'Prussianism' at its most acute stage. The recovery of light infantry was also helped, somewhat ironically, by the popular interest caused from 1774 onwards by Mesnil-Durand's theories; for his immensely deep battalion columns, if themselves clumsy and unarticulated, were to be linked together by thick chains of skirmishers. And while Guibert opposed such columns as a fallacious theory, he fully accepted the value of trained skirmishers.

But it was the French Revolution that completed the process, and so suddenly, that it was carried too far. The eager but ill-disciplined troops of the Revolutionary armies tended to break loose from their formations as soon as the advance began, and to merge with the skirmishing line, so that the whole became a dense swarm. Density and impetuosity

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marred the effect of these swarm tactics, for they made impossible the cool deliberation that is the essence of skirmishing tactics. After 1796 there was an improvement, and for a time the skirmishers were effectively used to pave the way for the assaulting columns which delivered 'the cheque for payment'. But as the toll of the Napoleonic Wars drained the resources of France, the supply of skilled skirmishers dwindled, and the replacements were no longer adequately trained.

Henceforth the role of preparation^a passed to the field artillery. That this new method was the fruit of necessity rather than of Napoleon's perceptiveness is suggested by the fact that it did not really ripen until 1809, although Napoleon was an artilleryman. In adopting it Napoleon was influenced by the example of Frederick, as well as by the teaching of Guibert and du Teil, but it is possible that he also remembered the proposals of Saxe.

For besides advocating lighter guns—16-pounders instead of 24-pounders—Saxe had invented an infantry-accompanying weapon intended to reinforce the fire of skirmishers in preparing the assault. 'Every century is to be furnished with a piece of ordnance of my own invention, called an *amusette*, which carries over four thousand paces with extreme velocity . . . is drawn and worked with ease by two or three men, carries a half-pound ball, and is made with a convenience to hold a thousand.' 'Before an

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engagement these *amusettes* are to be advanced in front along with the light infantry.' They might also 'on occasion' be massed for fire from any commanding feature. Whatever the connection of this idea with the Napoleonic practice, it claims a due place in the evolution of the artillery preparation, and is still more clearly the prototype of modern light machine-gun tactics.

The significance of Saxe's legion itself, however, is greater than that of its parts. For here in embryo we see the 'divisional system'—the organization of the army into permanently organized divisions capable of moving and acting independently. It meant that an army grew limbs, limbs which it could use to grip the enemy at one point while it struck him elsewhere. Through this, above all, strategy was to be revolutionized in the Wars of the Revolution and the Empire.

At the end of the seventeenth century Luxembourg had begun the practice of detaching a strong vanguard to seize and hold river crossings ahead of his main body. Marlborough used such a vanguard before Oudenarde. In the same War of the Spanish Succession, Villars in Flanders and Berwick in the Alps carried the practice a stage further—by distributing their armies, when on the defence, in three closely linked groups that could quickly concentrate if any one of them was attacked.

But Saxe went much further in the War of the

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Austrian Succession. He covered his communications and his flanks by 'divisions' detached from Antwerp to Liège and along the Meuse. Two infantry brigades, with artillery, were organized as a division throughout a season's campaign, while two of these divisions with one of cavalry formed an army corps; and he developed the art of combining the action of these separate formations. His legion was undoubtedly intended to perpetuate this system, for he remarks that 'if the commander-in-chief of an army wants to seize some post; to obstruct the enemy in their project', or similar enterprise, 'he has only to detach some particular legion on it' with a reasonable assurance that it is 'secure from any outward insult' and capable of putting itself 'in such a defensible state as to . . . stop the progress of the enemy's whole army'.

The difference between Saxe's conception and Napoleon's development was that Saxe's divisions were like a telescopic ring of spikes round a central hub, while Napoleon's were like the waving tentacles of an octopus.

Saxe was no less creative when he passed on from the *mechanism* of an army to what he styled 'the sublime branches of the art of war'. Not content with platitude and airy generalization, he took a number of imaginary or historical situations, illustrated by sketch-maps, and expounded the treatment he would apply to each case. It is distinguished by an

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invariable yet ever-varied opening move to upset the enemy commander's mental balance and dislocate his dispositions by some subtle surprise, based on a skilful use of the ground. And this is always a prelude to a swift concentration of strength against weakness, to crush some fraction of the enemy's army which he has temporarily isolated by his distracting moves. In some cases he would bait a trap for the enemy on one flank and follow it with a decisive manoeuvre against their other flank, or, better still, against their rear. In other cases, especially where he can use a river or stream for his own security, he would threaten the enemy on a wide front by separate divisions to pave the way for a suddenly unveiled concentration against a weak link in their front.

One finds here the basic ideas that governed Napoleon's combinations, mingled with a Hannibalic guile. If Saxe, hampered by the organic limitations of his time, fails to forecast the application of these surprise concentrations and sudden reshufflings of force to the wider scale of space—the theatre of war scale—in which Napoleon employed them, the transition was a relatively simple step when the conditions made it feasible. If Napoleon executed these manoeuvres with a speed that Saxe can hardly have imagined, Saxe did not fail to think out practical means to give his legions a strategic mobility equal to their tactical. In his day the rate of march was

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hampered not only by cumbrous formations and a complicated drill, but by the fact that troops did not keep step in time. Saxe found an unusual yet pertinent derivation of the word 'tactics', and, suggesting that his contemporaries 'were absurd to imagine that martial music was invented by the Greeks and Romans for no other purpose than to confound their senses', argued that 'the way to obviate the inconveniences of the march' was 'to march in *cadence*'. He gave point to the proposal by reminding them that people could 'dance together during a whole night, even with pleasure; yet deprive them of music and the most indefatigable will not be able to bear it for two hours'.

To remove the greater hindrance to mobility caused by the magazine-system of supply, Saxe proposed a system of company transport and messing which accords with modern practice. He also proposed that on long-range marches cattle should be driven along with the army and that biscuit should be used instead of bread—many promising plans of campaign were consumed in the ovens to which, as to stakes, the eighteenth-century armies were chained. As for Saxe's measures, they were exploited a century later by Sherman's army on its march through Georgia and the Carolinas—the greatest march ever made in modern times through an enemy country.

The conclusion of Saxe's *Reveries* is worthy of this

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most original man, for in it he turns from Mars to Venus, and offers a prophetic proposal for companionate marriage. It is worthy of a man whose father had three hundred and fifty-four illegitimate children, and who himself contributed notably to the propagation of the species as well as to its destruction.

But, unlike his father, Maurice of Saxony owes his fame to his propagation of thought. His influence has been obscured, and was undoubtedly diminished, by the spectacular successes that Frederick achieved so soon after his death—victories that for all their brilliance brought Frederick to the verge of ruin and cast the shadow of bankruptcy over a strategy that, in its pursuit of decisive battle, lost sight of the goal of war. Great as an artist of war, if too inclined towards ‘art for art’s sake’, Frederick was not comparable to Saxe as a creative military thinker. Nor can his influence on military evolution compare with Saxe’s. It is an irony of history that his reputation should have overshadowed Saxe’s—and also a tragedy for nations.

But in France at least, Saxe’s influence is clearly traceable in the events of half a century later. Not merely that of his ideas, but of his spirit—of scientific inquiry. By his explosive criticism, detonated from so powerful a source, he cracked the casing of professional convention, making it possible for more humble students to express their thoughts and de-

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velop a critical examination of the methods of warfare. Thus to him may be traced the outpouring of thought which followed in the next generation and became more clearly the source of Napoleon's profit.

Saxe *cleared* the way for those great changes to which, as we shall see, men like Bourcet and Guibert *paved* the way.

*Projection**The Movement that created Napoleon*

Two names stand out in the history of military thought during the second half of the eighteenth century—Bourcet and Guibert. They stand in the direct line of Napoleon's military heredity, and their influence on the evolution of the Napoleonic system of war is unmistakable.

Their own heredity, as well as the conditions of their time, hampered them in translating their ideas into action at the time. But as they both possessed the gift of expressing those ideas on paper they were able to carve a channel that carried their thought far beyond the limits of their own military careers. Those careers, nevertheless, had been far from insignificant, especially Bourcet's, even though fate compelled him to control campaigns under the cloak of another's authority.

I The Organizer of Dispersion

Pierre de Bourcet has just claims to be considered the greatest of chiefs of staff. He was certainly the

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most universal military adviser. There was scarcely a commander of his time, in want of a plan of campaign, who did not seek Bourcet's guidance. As Spenser Wilkinson remarks—'on every occasion when an important decision had to be made Bourcet would write a memorandum in which he analysed the situation and set forth in detail, with full explanations and reasons, the course which seemed to him best. In very many cases his suggestions were adopted and were usually justified by success, and when they were rejected the results were seldom fortunate.'

Bourcet was born on March 1st, 1700, the son of an officer who had distinguished himself as captain of a free company during earlier Alpine campaigns. His own birthplace was in the Alps, at Usseaux, and in the Alps he carved not only his fortune but his memorial legacy. Destined for the Law, he threw up his studies against his father's wish and went to the wars. After serving in the Pyrenees as a volunteer he became an officer when twenty, and after eight years in the infantry transferred to the engineers. Stationed at Briançon, near his home, he had a prolonged opportunity to study local geography in the Italian campaigns of 1734 and 1735. His failure to be born in the high nobility barred his way to actual command, but his inherited and acquired knowledge of the High Alps opened a discreet path to his talents.

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In 1742 Don Philip's Spanish army, which had passed through France to attempt a passage into Italy, besought the aid of a French army. The French could not spare any troops, but they lent Don Philip a brain instead. Bourcet, then serving as Chief Engineer to Maillebois' army in the German theatre, although in rank only a seconded captain, was despatched secretly as adviser to the actual Spanish commander, de Glimes—who proved a refractory and nerveless pupil. His ineptitude led to his supersession by La Mina, who, in the following year, not only adopted Bourcet's line of advance, but made him his quartermaster-general, or chief staff officer.

Bourcet thereupon drew up a plan by which the army was to advance in three columns, two on Chianale by converging passes, while the third loosened the resistance by a detour and descent on to the enemy's rear. But La Mina discarded the third column both to save time and because he feared the risk of dispersing his force. His consequent repulse, after successfully crossing the mountains, before the enemy entrenchments that barred the valley, and his enforced retirement again into France, formed a lesson not merely that 'more haste means less speed', but that calculated dispersion is often the only way to effective concentration. For obvious concentration of force simplifies the task of an opponent in concentrating to stop you.

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The mountains, which offered a defender such liberal scope to block the way, had taught Bourcet this vital truth. And by freeing his mind from the conventions of his age, they had led him to perceive the true theory of concentration that was his legacy to Napoleon. In the plains, where most campaigns took place, armies still by custom moved and fought as undivided wholes. In the mountains separation was enforced as the condition of success.

In 1744 a combined move along the Riviera route was arranged by the Spanish and French, whose army was placed under the Prince of Conti. Bourcet was attached to him, nominally as assistant quartermaster-general, and, advising against the Riviera route, drew up a plan for the invasion of Piedmont, which was adopted. After the opening move upon Nice, which he saw would serve as a distraction, the forces were to be switched back north to Mont Dauphin, which would serve as an ideal jumping-off point for three alternative routes.

We may infer that Bourcet was the author of a most significant memorandum which Conti sent back to Paris. After pointing out the key importance of Cuneo, it remarked that this point also offered Charles Emanuel, with the Piedmontese, a central position from which he could strike in any direction. 'Accordingly the first thing is to induce him to move his army away from Cuneo. The plan for effecting that is to threaten him at all other

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points of his position . . . especially the Dora Riparia, which is the farthest away. *This will make him divide his forces and then we can take advantage of the geographical conditions to reunite our own at the critical point before he can unite his.*'

I emphasize the last sentence. For here we have the essence of the Napoleonic method, even to the very word 'reunite' which he used to express his form of concentration, which followed a preliminary dispersion to induce the enemy to disperse their concentration.

Bourcet was careful to devise measures to meet the possibility that the enemy, likewise, 'could play the shuttle'. He himself arranged the moves by which the army was brought back from Nice to the Durance, seventy-five miles of the march being over narrow mule tracks—a masterly piece of staff work.

Then in a letter he outlined the next move—'It is impossible that the King of Sardinia can be in force everywhere; one of our corps is bound to get through, in which case they can all be united at the same point in a short time and take advantage of the gap made by the corps which will have penetrated his line.' We might be reading an exposition of the infiltration method 'introduced' by the Germans towards the end of the World War—certainly no better one could be composed—with only the difference that in 1744 mountain ridges took the place of machine-gun nests in 1918.

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The boldness of Bourcet's conceptions is seen in the fact that a combined army of 35,000, organized in nine divisions, fanned out along a seventy-mile front for the opening moves.

His chief fear was that the Spanish might mar the plan by some foolish action. It was too well justified. By pushing forward his advanced guards prematurely towards Cuneo, La Mina gave away the design. It was now too late to attempt the Dora Riparia distraction in the far north.

But Bourcet's cardinal principle—one of his most valuable contributions to the theory of war—was that 'a plan ought to have several branches'. 'One should study the possible courses in the light of the obstacles that have to be overcome, of the inconveniences or advantages that will result from the success of each branch, and, after taking account of the more likely objections, decide on the part which can lead to the greatest advantages, while employing diversions and all else that one can do to mislead the enemy and make him imagine that the main effort is coming at some other part. And in case all these diversions, counter-marches or other ruses fail of their purpose—to hide the real aim—one must be ready to profit by a second or third branch of the plan without giving one's enemy time to consider it.' His own plan here had provided for such a contingency, and the two northerly divisions were switched back immediately to develop

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a new line of advance nearer the centre of the arc.

Masterly staff work, for which Bourcet was responsible, brought the nine divisions over the passes without a hitch. They were distributed in four groups, over a twenty-mile stretch. The northern group was to descend and demonstrate in Varaita Valley, while its neighbour pushed down the Maira Valley and cut the enemy's communications. The third group (of three divisions) was to push east down the Stura Valley, while a concealed fourth group coming from the south was to cross by unlikely passes and descend in rear of the Barricades, a precipitous defile impregnable by frontal attack.

The move was triumphantly successful, and the only serious loss was due to the folly of the northern column commander who insisted on converting his feint into a frontal attack on the ridge of Pietralunga. The feat of his troops in capturing it, with the aid of mist, attracted far more applause in France than the skill with which the enemy's line as a whole had been inexpensively forced.

One may note that in 1794 Napoleon, then on the staff of the 'Army of Italy', prepared a plan for the capture of the Barricades which was similar to Bourcet's, but with the addition of an extra move on to the enemy's rear by a route not available to Bourcet.

I have given the outlines of this 1744 campaign because in it Bourcet provided a practical example

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of those principles which he expounded in later years as a teacher of war. He showed in that practice not only the value of a 'plan with branches', and how opposition could be paralysed by distraction, but also how wide distribution could be reconciled with security. For he took care to choose lines of advance that would give his divisions lateral lines of concentration, fulfilling his own precept that such distribution in 'small parcels' is 'safe provided that the general who adopts it makes such arrangements that he can reunite his forces the moment it becomes necessary'.

Moreover, spreading wide his columns at the outset, he drew in the net as he drew nearer the enemy, with the aim of closing it round an isolated part of them. Here again we see the future method that brought Napoleon such sweeping results.

But in 1744 Bourcet, in a subordinate position, had to watch the completion of his move being ruined by inter-allied dissensions, and the fruits of the brilliant initial success slipping away.

The following year Marshal de Maillebois was sent to replace Conti in charge of the combined army. Bourcet remained. This time the Riviera route was chosen, helped by a northerly diversion down the Dora Riparia. Maillebois' plan was to strike north into Piedmont from the Genoese Riviera, separate the Piedmontese from the Austrians, and roll the former back north-west on to Turin,

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forcing them to capitulate. He would then open shorter communications by the Dora Riparia and turn against the Austrians, with the aim of driving them out of the Milanese, back into the Tyrol.

Based on an acute exploitation of the psychology of allies and the nature of the country, this plan is almost identical in design, and underlying idea, with Napoleon's first campaign of 1796—long regarded as his most brilliant conception. And we know that he had studied Pezay's documented history of Maillebois' campaign; indeed, his first act on hearing of his appointment to command the 'Army of Italy' was to write to Paris asking for a copy to be sent off to him. He was thus able not only to reproduce it half a century later, but to avoid such slips as Maillebois had made in executing the original. And, in particular, the promptness with which Napoleon opened a new line of communications by the Dora Riparia suggests his debt to Bourcet, who in his theory laid stress on this idea of changing the line of communications, which Napoleon immortalized as his own.

In 1745 Bourcet's staff work once more smoothed the difficulties of the opening movement, and the Franco-Spanish army arrived safely on the coast between Albenga and Savona. Thence it struck inland on a wide front through the hills towards Carcare and Dego, and pressed on beyond to Acqui. But Franco-Spanish friction spoilt the chance of

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severing the opposing allied combination, and Maillebois was unwillingly led to advance on Alessandria without first taking the entrenched camp of Ceva on his western flank.

Nevertheless, the opportunity was redeemed, and the danger temporarily removed by a masterpiece of grand tactics. A sudden move east, as if to invade the Milanese, drew off the Austrians and, by a rapid turn-about, Maillebois re-concentrated his forces against the now isolated Piedmontese army. This was strongly posted behind the Tanaro. But Bourcet, reconnoitring, discovered the fords by a clever ruse. And next morning at dawn a wide-fronted attack in five columns took the Piedmontese by surprise, broke through their left centre, and turned their flank at Bassignana, while their right was immobilized. The thrust was ably designed to separate them completely from their returning allies, but the Franco-Spanish columns failed to push on as Bourcet intended, and the allies were allowed to reunite.

Thenceforward the campaign flagged, and in the autumn, although the conquest of Piedmont was uncompleted, the Spanish despite Maillebois' protests marched off to seize Milan. And Maillebois' appeals to Paris for fresh troops fell on deaf ears, all reinforcements being sent to Flanders. Thus in 1746 he was too weak to compel the Piedmontese to the separate peace that had been in sight. To make

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matters worse Louis XV, as a gesture of conciliation, placed Maillebois under the orders of Don Philip, and thus made him the tool of the Spaniards' hazardous political designs. After a disastrously muddled battle at Piacenza the combined army was trapped between the Austrians and the Piedmontese, who placed themselves across its communications.

From this peril it was extricated by Bourcet's insight in attempting the most audacious, and so least expected, way out. As the jaws of the trap were closing on the Franco-Spanish army, it made a night march south to the Po, where the advanced guard was ferried across to block the approaches on both flanks while the rest of the army was being brought across a bridge of boats. The skilfully judged destruction of roads and bridges, as well as careful piqueting of the heights, helped to ward off danger during the long retreat, by stages, to the Genoese Riviera and then to Nice. There Maillebois proposed to stand and Bourcet prepared a plan of active defence, using a central position for sudden strokes at the superior enemy forces on the rim. But the Spaniards were as resolute in retirement as they had been irresolute in the advance, and the army went back into Provence.

As a sop to the Spaniards, Maillebois was sacrificed and replaced by Marshal Belle-Isle, who had soon to meet a powerful enemy invasion of Provence. He threw it back by a counter-offensive in which we

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can recognize the guiding hand of Bourcet—by the way that, while a detachment moved towards Cannes as a frontal threat, three widely separated forces closed in upon the enemy's flank and rear near Grasse, so that by the time they were within reach of the enemy they were within supporting distance of each other.

The next step of the reinforced armies was a move to the relief of Genoa. La-Mina, again in command of the Spanish, wished the whole to push direct along the coast. Bourcet was strongly against it, and Belle-Isle accepted his arguments as well as his alternative proposal for a wide indirect approach—by a move 170 miles north to Briançon, then across the mountains and down the Dora Riparia upon Turin—while the enemy's attention was fixed on the Riviera. But Louis XV sent Belle-Isle orders 'to concur in the plan which M. de la Mina suggests to you of marching directly, by the shortest way, to Genoa'. The wisdom of a Bourcet did not count against the policy of a distant king.

The shortest way proved the longest in time. Only a detachment was allowed to be used for the Dora Riparia move, and Charles Emanuel was able to concentrate against it, although at the price of raising the siege of Genoa. Belle-Isle apparently would not spare Bourcet to accompany the detached force, and, as a sequel, its commander did not adhere to the plan that Bourcet had prepared,

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but made a frontal attack on the Assietta position which ended in a disastrous repulse. The news of it paralysed the main army on the Riviera, and gave Charles Emanuel time to reunite with the Austrians. They then invested Ventimiglia and established themselves in an almost impregnable position.

But Bourcet once more brought his brain to the rescue and devised a plan, based on his past study of the ground, by which a weak spot was found that opened the way to their rear, and thus relieved Ventimiglia. In his despatch to Louis, Belle-Isle begged that Bourcet might be made a brigadier-general in reward, saying—‘He has been the soul of all that we have accomplished.’ He might have added—since 1744.

This feat closed the campaign of 1747, and early the next year peace was made. Bourcet, however, received his promotion and was soon afterwards made director-general of fortifications in Dauphiné, where he threw himself into the task of mapping the frontier.

Nine years passed before the Seven Years War, an interval that allowed Bourcet to digest the lessons of his experience. But he was still eager to learn, while his opportunities became enlarged by his fame, if his pupils did not always prove apt. Thus in the campaign of 1757 he accompanied the double-headed army of the allies under the Prince de Soubise and the Prince of Saxe-Hildburghausen,

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being given command of the artillery and engineers. It was on Bourcet's advice that the army took up the ridge position near Branderode which gave it an initial advantage and discomfited Frederick's plan of attack. It was apparently Bourcet also who, when Hildburghausen insisted on taking the offensive, suggested the next move to a position that would have cut Frederick off from his source of supplies on the Saale. It meant a flank march in face of the enemy, but the danger of interference was provided against by a flank guard. Unfortunately when Frederick moved to head off the allied army, Hildburghausen jumped to the conclusion that he was running away, and by impetuously pushing in pursuit exposed himself to Frederick's decisive counter-stroke.

At the end of 1758, when the French army went into winter quarters on the Main near Frankfort, Soubise was replaced by Marshal de Broglie, and for him Bourcet prepared a defensive plan similar in principle to those he had drawn up for Maillebois and Belle-Isle in the Maritime Alps. The army was quartered in groups behind a thirty-mile-wide screen, so that its fractions could be quickly concentrated in one of four possible positions, according to the direction of the enemy's advance.

When the Anglo-Hanoverian army under Prince Ferdinand advanced in the spring, Broglie promptly moved to the right flank position at Bergen, which

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was so skilfully sited on a ridge that Ferdinand could only attack with part of his army, while a fraction of the French sufficed to check this. The remainder, held in reserve and concealed behind woods on the flank, then emerged to deliver a counterstroke that decided the issue.

That winter, of 1759-60, Broglie was made commander-in-chief. And he took the opportunity to issue regulations by which the army, infantry and cavalry, was organized in permanent divisions for the campaign. Each division formed a separate column on the march, and when within close reach of the enemy was itself formed into two or more columns, so that it took less than half an hour to deploy into line of battle.

Broglie had been a former lieutenant of Saxe in Flanders, and his new organization came two years after the posthumous publication of the *Reveries*, so that it is impossible to say whether, in making this epoch-making change, he was more influenced by Saxe's 'legion' or by Bourcet's mountain-warfare practice.

The change certainly made an immediate and immense improvement in the rate of movement, as well as in the speed of deployment. In addition, he threw out strong detachments like telescopic arms, at some distance, to cover his own flanks during the march and later to turn the enemy's flanks.

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peatedly compelled to fall back, sometimes owing merely to Broglie's wide front which threatened to envelop him, at other times by sudden night marches which made his position untenable. It was Napoleonic warfare in embryo; indeed, in all but the decisive touch. Broglie's moves lacked the sustained impetus which would have enabled him to crush the foe he had outmanœuvred.

Partly this was because of enforced pauses to bring up supplies, and the delay in their arrival over bad roads. Bourcet, in comment, suggested that Broglie should have had supplies ready on the Rhine near Düsseldorf, and have changed his line of communication thither when he had advanced as far north as Corbach. It was left for Napoleon to profit by the reflection.

Another reason for Broglie's failure to reach a decision was the strategic immaturity of his divisional system. In the past the army had been a rigid and armless body. Broglie's army had become a flexible body with semi-rigid arms which could cover the body and even expose the enemy's body to a blow, but which depended on their own body to deliver the blow. Napoleon's army would be an octopus with waving tentacles, any one of which could grip on to the opponent, whereupon the others would automatically close upon him also. More truly still, perhaps, Napoleon's army might be compared to a fluid body, a loose grouping of divisions,

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which, like blobs of quicksilver, would suddenly flow together, and coagulate on striking an obstacle.

The comparison is the more apt because Napoleon's divisions had a tactical impetus that could not be expected of Broglie's, only just beginning to free themselves from stiff-drilled formalism. We must remember, too, that when Napoleon appeared on the scene he found the French army possessed of mobile field artillery to support that impetus, whereas in the middle of the eighteenth century it only existed in Saxe's prophetic imagination.

In the Alps, Bourcet had, as we have seen, created the system of holding the divisions *réunies*, of extending and closing them in, according to the situation. In the Alps, half a century later, Napoleon would employ the same system. And later, having learnt not only its value but its secret, he would apply it in the plains. He was able to do this with security through the mobility he infused into them. Bourcet, as his advice to Broglie shows, had realized the possibility of applying his system in the plains, but the conditions no less than the conventions of his time prevented his full development of it there.

In 1762 Bourcet, now promoted lieutenant-general, was called to Versailles by the Duc de Choiseul to take charge of the correspondence with the army then operating against Portugal under the new Franco-Spanish compact. Bourcet had never seen the country, but his map-sense and creative

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imagination were so highly developed that the Minister's letters of instruction drew from the Prince de Beauveau the astonished comment—'You have at your side a devil or an angel who enables you to divine all our positions.'

After the war, in 1764, Choiseul established a school for staff officers, at Grenoble, and appointed Bourcet as director. In this post he remained for seven years, the only interlude being in 1769 when he acted as adviser to the Comte de Vaux, who conquered Corsica in a brief campaign that was ended by the decisive defeat of Paoli's forces at Pontenovo. With this fresh laurel Bourcet returned to his teaching and, with the experience of over twenty campaigns behind him, devoted himself to preparing the minds of the men of the future. For them he set forth his gospel in a book which he called *Principes de la guerre de montagnes*, a title which hardly does justice to the wider sweep of his thought. Although manuscript copies were circulated, the book was not printed, being regarded, presumably, as a confidential repository of wisdom to which only French officers should have access.

Owing to this, if still more to the fact that in appearance his teaching was mainly related to war on the Alpine frontier, its theory and past practice, Bourcet was a channel of thought that flowed apart from the main stream—until the young Napoleon Bonaparte dropped into the channel, giving it a

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torrential force that broke down all barriers and carried Bourcet's thought into practice over the length and breadth of Europe. Bourcet himself died in 1780, being then almost blind from ceaseless study of his beloved maps.

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The main stream, given a new direction by Saxe, flowed on through Guibert. A much younger man than Bourcet, he made a much wider channel. While Bourcet influenced the minds of generals, Guibert influenced the minds of the military world as a whole, including generals and including foreign armies. For his *Essai général de tactique* was published in many editions, and translated even into Persian. Indeed, his ideas carried further still, beyond the military world and into the salons. It was an age when society not only found pleasure in intellectual conversation, but when its members regarded war as a sufficiently serious subject to be worthy of intelligent discussion.

Again, while Bourcet influenced thought by discreet memoranda, Guibert flung discretion as well as his ideas to the winds. The shock he administered to conventional opinion did much to open the way for his thought to take effect, and the thought of others as well. One may doubt whether the full application of Bourcet's ideas would ever have been

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possible without Guibert to break open the sealed doors of the military mind.

Looking back, it may seem astonishing that the temperate common sense of his military proposals should have provoked such floods of counter criticism, for by subsequent historians his technical views have been well described as 'enlightened conservatism'. But the reaction to his broader views is less surprising. For he saw that, before his military ideas could be fulfilled with real effect, a thorough change of spirit was necessary in the army, and consequently in the society upon which it was based. This perception came the more naturally to him because he belonged to a generation fermenting with new social ideas.

Born in 1743, he had his outlook determined and his life's work foreshadowed by his earliest years. For his father, the Comte de Guibert, was not merely a professional soldier, but an ardent military student. And he began as early as possible to infuse his son with his own enthusiasm for the study of war. His method of teaching foreshadowed the *Kriegspiel* which played so large a part in the training of the Prussian Army a century later.

'My mind was scarce opened when he gave me the first lessons of the tactic. He successively taught me by words, by diagrams, and on the ground; when I had once acquired a just conception of its elements, he dissected on pasteboard a variety of

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movable figured plans, with which all kinds of ground could be represented. On these plans he demonstrated to me, with small wooden blocks, all the mechanism of armies. He showed me a representation of battles which could furnish apt examples; he more particularly showed me those of the war that was then in progress, and of which the details and events had the most attracted my attention; subsequently I had to apply my *coup d'œil* and judgment on all kinds of ground. On returning home we would resume our game. He allowed me to make objections. He allowed me to exercise my own imagination. Insensibly it acquired more extension and justness. We next formed two armies, and each took command of one of them. Then in different types of country, represented at chance by the arrangement of the paste-board plans, we made our armies manœuvre; we made them execute marches; we made choice of positions; we formed in order of battle one against the other. We afterwards reasoned out between ourselves what we had done. My father encouraged my questions, and even contrary opinions. The nights frequently passed in this occupation, so much did this study absorb us, so well did my teacher know how to make it interesting.'

At sixteen Guibert had his first taste of active service. He accompanied his father, who had been appointed Broglie's chief-of-staff, throughout the

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campaign in Germany. Thus at the outset of his military career he came in touch with the most progressive military thought of the age. After the Seven Years War he went with the original expedition to Corsica, where he won the Cross of St. Louis at the age of twenty-four, and was then employed in forming and training a Corsican Legion, of which he became colonel a few years later. The task of training a body of men *ab initio* proved to him, as it has to others, a call to think out his own military foundations, and a fruitful source of practical ideas.

His intellect ripened early, for he was only twenty-nine when, in 1772, he produced his great work on war. His opening criticisms of the 'servile' imitation of the past, of the 'reigning empire of custom and prejudice', of the fallacy of mass, recall those of Saxe, and perhaps betray the influence of Saxe upon his thought. So does his comment that although a few leaders had known 'how to move those unwieldy masses', they bequeathed no system of principles, perhaps because 'they were actuated more by instinct than by reflection'. Similar again, to Saxe, are his arguments for creating a science of war and a 'tactic of manœuvre', which in his definition also embraces what we term strategy—the formation and movement of armies as well as their handling on the battlefield.

Disclaiming the discovery of new principles, his

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role, he said, was to develop and assemble, as the foundation of a science, principles that were 'the result of every happy thought of all the ages before us, with whatever could be added by present experience'. He capped this with coming experience when he remarked:

'Let us put a stop to this apology; it will not prevent criticism, it will not, even though I assert the most evident opinions, prevent numbers of people from denying them. I have lived long enough to be convinced that every author must run the chance of the public's good or bad opinion, and that truth is always filtering through a variety of prejudices, while error in impetuous torrents is spreading wide and ravaging empires.'

The value of his new construction owed much to the fact that it was built up from the very foundations of tactics—the fighting individual and unit. Here he was helped by his own experience as a regimental trainer of infantry—the best school of all for the man who would build a theory of war that will be proof against damp reality.

He ascribed the prevailing tactical immobility to the 'custom of the pike' and the belief that 'the force of infantry consisted in the density of its order'. Hence he condemned Folard's idea of a phalanx-like column, now revived by Mesnil-Durand, which would have revived these evils in an exaggerated form. But he fully appreciated the value of a handy

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and articulated column for manœuvre, in approaching the enemy, and he also recognized the value of depth to produce a succession of efforts where necessary. He regarded the cult of the bayonet as a relic of the days when battles were decided by push of pike, and argued that familiarity bred contempt, so losing its moral effect as a last resource. He significantly observed that even in his day 'bodies of infantry seldom make use of the naked steel, and when they march to the charge they seldom meet near enough to cross bayonets'. The same phenomenon has been observed in every subsequent war down to 1914, and is always hailed as a fresh discovery, only to be forgotten after it. One of the evils of this cult, in Guibert's view, was that it created a demand for an 'extreme symmetry and meticulous dressing of formation', which hindered mobility.

Guibert wished to simplify the drill movements, keeping only those that were 'applicable to war', in order both to quicken manœuvre and save time for useful training. The speed of battlefield manœuvre had already improved through the adoption of the cadenced step that Saxe had been the first to advocate. But Guibert's concern now was to quicken the rate of step. 'I think that sixty steps per minute, as is customary with us, renders the march much too slow, and painful to endure.'

As is habitually the way with military reforms, the rate was raised at first merely to seventy, but the

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ultimate introduction of a quick step of a hundred and twenty under Guibert's influence gave the armies of France a vital advantage over opponents who still adhered to the customary seventy paces per minute. On this simple, yet pivotal fact was based the conquering mobility of the new tactics. It suited the national character no less than the temper of the Revolution.

Guibert's appreciation of the value of 'national tactics' is equally shown in his insistence on 'reasoning with the French soldier', on explaining to him the purpose of the methods and dispositions he is called on to adopt, in order to obtain a quicker and fuller response from him. One of Guibert's strongest articles of faith was the need of basing each nation's system of war on its national characteristics, and to this end he analysed them in turn. His verdict on our record is that 'the English had no tactics, very seldom good generals; but an order which suited their temperament; a courage little capable of the offensive, but difficult to shake'.

Although a great admirer of Frederick, whose impression can be seen in a number of Guibert's proposals towards accelerating mobility and developing fire-power, Guibert rejected Frederick's system of 'attack fire', that succession of rolling volleys while advancing, which so struck the imagination of Europe. Guibert believed in fire *effect*, and for this held that deliberate fire, which meant being

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stationary and firing in an unconstrained position, was essential for effect. 'This type of fire is the most lively and slaughtering of any; it stimulates the soldier; it makes him insensible to danger; it suits the address and vivacity of the French.'

Although Guibert was an advocate of well-aimed infantry fire to prepare the assault, and so of the light-infantry principle, he was opposed to the employment of irregular light troops, contending that the ordinary troops became too dependent on them, while they themselves were unfitted to drive home the attack. This attitude is certainly proof of Guibert's independence, for since the Seven Years War the tide of military opinion was running strongly in favour of such corps of light troops, and Guibert himself had been an officer in them. But he considered that their specialist tendencies outweighed their value. He wished, instead, to train all the infantry to be capable of scouting and skirmishing, so that light-infantry tactics would be grafted on to the cohesion of the disciplined regular. For the outer screen of the army he would still use light corps, but to ensure mobility they should consist of cavalry, with a small proportion of infantry, who could be mounted behind them.

The guiding idea of mobility also governed his views on artillery. He had seen that a large quantity of artillery was a brake on the mobility of the army, and so he refused to accept the growing cry

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that the artillery was 'the soul of an army; that its superiority should decide the fate of a battle'. But his conservatism was more apparent than real, for his objection was to the unwieldiness of the trains of artillery that accompanied armies, and he made concrete proposals for the creation of a truly mobile field artillery through new methods of training and handling. He wished to have fewer batteries, but more mobile, with which quick concentrations of fire could be achieved. 'The object of artillery should not consist of killing men on the whole of the enemy's front, but to overthrow it, to destroy parts of this front, . . . then they obtain decisive effects; they make a gap.'

The method which Guibert here indicated was formulated with fuller detail six years later in a little book entitled *L'Usage de l'artillerie nouvelle dans la guerre de campagne*, written by the Chevalier du Teil. It borrowed freely from Guibert, to whom the author acknowledged his debt, but differed from his view that the quantity of artillery should be cut down to lighten the movements of the army. In du Teil's opinion the necessary increase in the artillery's power of movement would not only allow more artillery to be used, reconciling the demand for fire with that for mobility, but would provide the means of overcoming the tactical obstacles to the army's mobility.

'We must multiply the artillery at the points of

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attack which ought to decide the issue. . . . The artillery thus nourished and multiplied intelligently produces decisive effects. . . . It is through this science of movement, through rapidity and intelligence in the choice of positions, that the artillery will preserve its advantages over the enemy's, as it will continually concentrate its fire on the decisive points and will always keep up with the troops.' 'We must reunite the greatest number of troops and the greatest quantity of artillery on the points where we wish to force the enemy's position, while creating an illusion of attack on the others.' 'The moment when the troops should assault is determined by the ravages that the artillery has made on the troops and the defences of the enemy, . . . the victory that the artillery has prepared will then only depend on the dash of the troops.'

Here du Teil develops the fully fledged principle that the decision must be prepared, the necessary disorganization and demoralization created in the resistance, before the attack is delivered. And he establishes this preparation as the role of the artillery.

Now du Teil was an officer in the artillery regiment of La Fère, to which a few years later, in 1785, the young Napoleon Bonaparte was posted on receiving his commission. In 1788 the regiment moved to the Artillery School at Auxonne, a centre of progressive thought which was in charge of the

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Baron du Teil, brother of the Chevalier. There Bonaparte quickly became a favourite pupil of the commandant, who employed him on various experiments. A few years later he spent a 'busman's holiday' at the Baron's château, discussing military questions, just before his early attempt to play a part in Corsican politics, and the memoranda he prepared on the defences of Corsica bear the impress of the Chevalier du Teil's teachings. So does the dialogue in the revolutionary pamphlet '*Le souper de Beaucaire*', which Bonaparte wrote in 1793. That summer after his expulsion from Corsica a new opportunity was opened to him by the Chevalier himself, then commanding the artillery of the Army of Italy, who made Bonaparte his assistant and employed him in organizing the coast defences of Provence. And in the autumn it was under the cloak of du Teil's authority that Bonaparte applied the principle of concentrating fire on the key points with a success that led to the capture of Toulon and made his own name, thanks to du Teil's generosity in giving him the credit.

Thus the chain of causation that led to the Napoleonic method of artillery preparation can be clearly seen, and the only cause for surprise lies in Napoleon's slowness to develop in open warfare the method which he had applied so well in siege warfare, and which du Teil had intended for use in the field.

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But du Teil's teaching had not been confined to artillery tactics, and in his treatment of grand tactics, basing himself on Bourcet as well as on Guibert, he had pointed out the value of preparatory distraction, of the reunion of forces, of the surprise concentration of strength against a weak part, of the manœuvre against the rear, and of activity as the means to reconcile these forms of surprise with one's own security. Indeed, his very artillery method was an adaptation to artillery usage of the method which Bourcet had employed in forcing a mountain barrier. Du Teil's little book not only quotes Bourcet's *Principes de la guerre de montagnes*, but discusses mountain war problems in very similar terms. It is probable, however, that Bourcet's thought influenced Napoleon's mind earlier and more directly, through the agency of Baron du Teil, who came from the same district as Bourcet, had stayed in the same places, and had served in Broglie's army during the Seven Years War, so that the two had many opportunities for personal as well as intellectual contact during their careers. Thus the ample indirect evidence that Napoleon was familiar with Bourcet's great work is reinforced by the direct inference that he had studied a manuscript copy in the Baron du Teil's library.

Let us return to Guibert, whose influence was wider, if not quite so concrete. In the first part of his book Guibert had sought to lay the foundations

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of a more mobile army. In the second part he sought to make a more mobile type of warfare. Having, in his words, defined 'those principles on which the different corps of an army should be formed and constituted, . . . the question is now how to combine these corps, how to accord and adapt them to all great manœuvres in war . . . the grand tactics'. It is interesting to note that Napoleon, who often quoted from Guibert, habitually used this term—'grand tactics'.

It was above all in the movement of armies that Guibert, following Saxe, found the key to future decisiveness. The army should always be distributed in divisions, each forming a separate column. 'Arrived within reach of the enemy, the general either draws off or reinforces particular columns according to his judgment, advancing one, leaving another in the rear, directing this towards one point, that towards another. . . . The troops . . . having rapid methods of deployment, form for battle in an instant, and the attack is begun before the enemy has had time to distinguish the point where the blow is intended; or, even if he has discovered this point, before he has time to change his disposition to ward off the blow.'

Guibert points out, for the enlightenment of those who sedulously copied Prussian fashions, that the 'oblique order' had a purpose more significant than its form. 'There is no necessity that the front should

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exactly delineate an oblique line with respect to the enemy's front.' More apt is what he terms '*the oblique order of circumstances*'; that is to say, the order in which the army, though not oblique to the enemy, is nevertheless formed, either by the nature of the ground, or the skilfulness of its movements, to attack him on one or more points, and to be itself unattainable on the others'. Guibert's personal witness of Broglie's object-lesson at Bergen doubtless helped him to draw this distinction, which makes clear the place of Frederick's famous 'oblique order' in the evolution of the method of concentrating strength against weakness.

Advancing in this flexible group of columns capable of variable combination, an army would have an inherent and vital advantage over an enemy of superior strength. 'Just as lightning has already struck when the flash is seen, so when the enemy discover the head of the army, the whole should be there, and leave them no time to counteract its dispositions.' It is noteworthy that Napoleon's first campaign of 1796 has often been compared to the play of lightning flashes. And there is a significant parallel with one of Napoleon's favourite phrases in Guibert's reference to 'this kind of war, this method of reconnoitring the enemy with the whole force of the army, of forcing it to fight, of luring it into a false manœuvre and profiting from this with rapidity'.

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For the defensive also, Guibert advocated the same method of activity and fluidity. 'A general', he said, 'should occupy the likely points of attack with his advanced troops and keep, behind and between them, the rest of his army in columns, so as to transfer his forces to the point where the enemy make their effort, and sometimes to the point where . . . they lay themselves open to attack.' One could not desire a more vivid impression of Napoleon's future method of active defence than in Guibert's forecast of how his new model general 'would be continually in movement before the enemy, endeavouring to make them irresolute, luring them into a slip, deceiving them as to the number and disposition of his own troops, revealing to them a point, apparently unguarded, so as to entice them to direct their attack on that point', whereupon 'he will know how to make a counter-offensive movement against them'.

Here we see that Guibert conceived the spirit and the essential fluidity which was triumphantly manifested in Napoleon's practice—in his handling of what I would call the 'waving net', or the 'floating blobs of quicksilver'. It is true that Guibert did not define the method of application with the precision of Bourcet—he was pre-eminently a philosopher of war, while Bourcet was a strategical scientist. It is true, also, that Guibert did not foresee that the net, the group of mutually supporting divisions, would be stretched over so wide a space as they were to be

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in Napoleon's hands. But this wide spacing arose not so much from deliberate design as from a vital change in supply conditions that Guibert not only foresaw but suggested, as we shall see. Guibert's thought, moreover, continued to expand after he had written *Essai général de tactique*, for whereas he had recommended that the army should concentrate if battle was anticipated, later, in 1779, when he wrote his *Défense du Système de guerre moderne* as a reply to his critics, he suggested extending one's forces of calculated intent. 'The art is to extend them without exposing them, to embrace the enemy without being disunited, to link up the operations or the attacks to take [the enemy] in flank without exposing one's own flank.' This is a perfect summing up of the Napoleonic method—a generation beforehand.

Guibert was in unison with Bourcet in making adaptability to ground and circumstance the keynote of his *system*. For what he intended was a system—'however infinite, however varied all combinations may be, it is nevertheless by the same mechanism that they can be executed'. And, in his thought, it would cure the passion for taking up positions that obsessed the generals of his day. For his army would nullify the value of positions by turning them as soon as they were taken up. Its wide distribution would enable it to manoeuvre rapidly towards the enemy's rear.

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‘Such is the routine of received ideas that, no army having as yet been known to have been attacked in the rear, such a thing is therefore looked upon as impossible. Nothing, however, is more possible. . . . What will the enemy attempt if surprised by this new kind of war? Will he wait while an army skilful in moving, in swooping rapidly on the weak part of his position, changing in a moment from the order of march to that of battle, finds itself ready to attack the flank or rear of his position? This inaction will prove fatal to him. Will he change his position? In that case he will lose the advantage of the ground on which he had relied, and he will be forced to accept battle where he can.’

Hence Guibert’s prescription for loosening the enemy’s hold, and throwing him off his balance was—‘move the army on to the flank or rear of the enemy’. The manœuvre by which the whole army was placed astride the enemy’s communications was to be the most deadly of Napoleon’s strategic devices.

But, for it to be possible, Guibert roundly declared—‘it is necessary to have an army differently constituted from ours; an army which . . . should be prepared for the new kind of operations’. And with this comment he passed to the subject wherein the essential change must take place—the subsistence of armies. The rapid and wide manœuvres he wished to see could never be achieved so long as the army

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was tied to a chain of magazines. This chain, he asserted, had been riveted round the legs of armies by the practice of handing over their supply to profiteering contractors. Not the least of its evils was that generals were ignorant of the working of the system of supply, and consequently left commissaries to control their movements. It was a fundamental error to 'have separated the science of subsistence from the science of war', Guibert argued with great force that the whole system should be re-organized, that officers should be taught the details of supply, that both baggage and magazines should be greatly reduced, not only by curtailing superfluities, but by making a better-designed use of the resources of the country where the army was campaigning.

In an enemy's country 'the army should live at his expense', and, by making the offensive war that he prescribed, an army would have the best prospect of doing this. 'The enemy should see me marching when he believes me to be fettered by calculations of subsistence; this new kind of war must astonish him, must give him no chance to breathe anywhere, and make plain at his cost this constant truth—that there is scarcely any position tenable in face of a well-constituted, temperate, patient and manœuvring army.'

On this note Guibert concluded his book. By it he made clear the basic condition on which the new

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mobility must depend. But it needed a revolution to bring it about—the French Revolution.

In 1772 his proposals were naturally obnoxious to the contractors and other parasites who battered on the army. His military criticisms were hardly more palatable to the generals. And he gave common offence to ministers and generals when he boldly declared that ministers 'prefer to entrust their troops to mediocrities incapable of training them, but passive, responsive to their whims . . . instead of to the superior man who might gain too much credit and resist the prevailing opinion'. Its stark truth did not make it any easier to swallow.

But Guibert aimed his criticisms higher still. His book was dedicated to 'my country', in a way that virtually put country before king. For the preface continued—'May the day soon come that will give the sacred name of country its full significance and force, in making it the cry of the nation and the watchword of all who compose the State. May the ruler and his subjects, the great and the humble, feel themselves honoured by the title of "citizens".' 'This confederation of all hearts and all powers will make France as happy as I wish.' 'I shall treat of her administration, expose its defects, seek a remedy for them; raise the edifice of a constitution, at once political and military; of a national discipline, a complete tactic. . . . Let us avoid that prejudice which accuses philosophy of lowering pat-

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riotism. It is far otherwise. It ennobles it, and prevents it degenerating into conceit. Enlightened by it, the citizen without fanaticism is a true friend to his nation, and he harbours no hate or contempt for the rest of mankind. . . . I am not dismayed by the immensity of my plan, by my youth, or the weakness of my talents. Thus Columbus, departing for the discovery of a new World, did not draw back at the sight of the ocean or the fragile vessel destined for his voyage. I may have his intrepidity, perhaps not his success.'

Not content with covering the whole field of war, Guibert in his book planned a new France to make possible his 'new model' army, and bitterly condemned the existing state. Having held up Republican Rome as an ideal he remarked:

'What picture does modern Europe offer to the philosopher who contemplates it? Tyrannical, ignorant, or feeble administrations; the virtues of nations smothered by their vices, private interests prevailing over the public good, . . . oppression of subjects reduced to a system. . . . If the philosopher, weary of so much rottenness, can find any objects more consoling to look at, it is on some of the small states and on some moral and political truths which, filtering gradually through the false, will develop little by little, until at last perhaps they will reach the rulers, occupy the thrones, and make posterity more happy.'

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Guibert's doubts as to the reception of his bold criticisms were well justified. The book made so great a stir that the author became an object of suspicion to established authority, military and civil. All the forces of privilege and prejudice were henceforth leagued for his frustration, working by whisper as is their wont when his position became established in spite of their resistance. On the other hand, this book gained him an instant if not altogether helpful popular triumph in the intellectual world, and in the social world where it was now the fashion to be philosophical. Even Voltaire wrote verses in tribute to him. Following another fashion of the time, he was invested with the complimentary nickname of 'Bayard', which scarcely fitted his progressive outlook, and with the motto '*Sans peur et sans reproche*', which in its second part was open to qualification.

For his personality and gift of speech reinforced his writings so powerfully that certain types of defence collapsed with embarrassing ease. His personal magnetism now proved all too attractive to the other sex, and fair ladies swooned in ecstasy at the eloquence with which he read extracts from his works. Most embarrassing of all his successes was that gained over the reigning Queen of the salons, Julie de Lespinasse. On his part, seeking the intellectual sympathy and the literary influence which she could so well provide, he found himself caught

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in a spider's web of erotic 'sensibility', the unwilling object of a devouring passion. He had the strength to withstand it, helped by a certain measure of protective adroitness. He even made a happy marriage, besides continuing other more restful liaisons, while still pursued by her exacting desire. From this her death brought him release after three years, but at the price of committing his reputation to the execration of all the enchanted readers of her letters who are carried away by their own emotions.

Few such readers, naturally, are aware of his claims to immortality in another sphere; claims far greater in every sense but that of 'sensibility'. It is only since his military ideas found fulfilment that his military fame has faded. The way he has been swallowed up by Napoleon is perhaps a retribution for the way he escaped from Mademoiselle de Lespinasse. But during his lifetime his name meant far more to the world than merely the target of her love-letters. The *Essai général de tactique* was acclaimed abroad long before its views found official favour in France. In England Burke was a great admirer of them. Visiting Germany, the young critic was received with honour as an authority by Frederick the Great, who discussed the theory and practice of war with him at length. He was invited to St. Petersburg by the Empress Catherine, whose admiration for his works was doubtless enhanced by reports of his magnetic personality. He yielded up the oppor-

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tunity of embracing this opportunity after being assailed by Julie de Lespinasse's lamentations over the dangers of the Russian climate.

Eventually the justice of Guibert's criticism and suggestions won recognition in France, and he received a chance to apply them. With the accession of Louis XVI, power was temporarily entrusted to Turgot's ministry of reform. The sequel was the appointment in 1775 as minister of war of a military reformer, the Comte de Saint-Germain who had reorganized the Danish Army after jealousy and intrigue had thwarted his career in the French. He in turn accepted Guibert's help, and between them many improvements were made in the organization and training of the French army, as well as in the appointment of officers. Regiments of light horse and light infantry were raised, tactical manuals rewritten, tactical exercises developed, and the creation of an efficient artillery arm was achieved, the last under Gribeauval's guidance. The money for these improvements was found by cutting down useless elements, and especially the ornamental household troops.

But these reforms naturally gave offence to the forces of privilege, and before long they found a lever to swing ignorant public opinion to their side. Saint-Germain had attempted to regularize the system of punishment, in place of indiscriminate brutality, but his system of awarding a number of

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strokes with the flat of the sword, although milder in effect, was denounced as Prussian, and uproar compelled him to resign in 1777. His fall involved that of Guibert, who was relegated to a provincial staff appointment by the courtier-generals who again dominated the army.

Ten years passed, during which the monarchy was visibly cracking, and then a belated attempt to repair the damage brought a hurried move for reforms, army reform among them. An Army Council was created, as Guibert had long since urged, and he himself was made its secretary. A year earlier he had been elected a member of the French Academy. Under his inspiration, and that of Gribeauval, rapid and far-reaching improvements were made in the state of the army. A permanent divisional organization was created. The manuals were revised, and in their new form they were to stay unchanged until 1830. Drill movements were curtailed and simplified—to the benefit of the new citizen armies that were soon to spring up. The pay and conditions of the rank and file were raised. The top-heavy establishment of thirty-five thousand officers was reduced to ten thousand by the deletion of the overwhelming majority who were merely privileged and pay-drawing absentees.

But the Council, being mainly composed of the high nobility, failed to redress the handicap which their inferiors suffered in prospects of promotion. It

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also retained the code of punishment which had caused indignation earlier, and had become more distasteful as social unrest became greater. Thus the scheme of reform was once again the target of attack on both flanks. And the officers of the nobility went so far in their opposition that they tacitly encouraged resistance to the orders of the Government, condoning insubordination. It might be said of them that they cut their own throats in a delayed-action form.

For the army reforms, public opinion justly regarded Guibert as responsible. Unfortunately for him, it was so blinded to the real military progress achieved by anger at what had been left undone, that it unjustly held him responsible for the only points he had been powerless to alter. He paid the penalty when the States General were convoked—for May 1789. Offering himself for election to the Chamber of Nobles, he was howled down by his own class when he rose to speak. 'Then', in the words of Duruy, 'a great bitterness, a disgust with life, overcame him. He took up his pen a last time to vindicate in a few proud pages the Council of which he had been the soul; then closed his eyes and passed away.' To be more exact, he died a year later, in May 1790. But he certainly died a disappointed man, gnawed by a sense of futility.

Yet at that moment in Corsica, where he had made his name as a young officer, there was on

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leave another young officer who would not only profit by all that he had done to modernize the French Army, but would realize his dream of how it should be handled. And to that officer, Lieutenant Napoleon Bonaparte, as well as to many of his fellows, the writings of Guibert had been a spring of inspiration as well as a source of knowledge. In years to come, Guibert's widow was permitted to state in the preface to a new edition that 'Bonaparte has carried the *Essai général de tactique* with him in the camps, and has said that it is a book fit to form great generals'.

But one may reasonably infer that its earliest influence on the politically minded young officer lay in its psychological appeal to his rising ambition. For Guibert was not only the progenitor of Napoleonic warfare, but the prophet of Napoleon's coming.

He painted a picture of his ideal state that has a significant likeness to Napoleon's state-building projects, and he prayed for the uprising that would prepare the ground for it. Then he concluded with the prophecy that, a state akin to Republican Rome having been created, it was almost certain that 'one great genius must spring up', assume the powers of dictator, seat himself on the throne, and carry out the complete reform of the whole political and military system.

'From amongst the writings of my fellow citizens,

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perhaps in mine, he may gain the laudable desire and learn the method of carrying his projects and wishes into execution.'

But Guibert's thought did not stop short at national regeneration. He foreshadowed, more ominously—'a people that, to strict virtue and a national soldiery, would join a settled plan of aggrandizement, who, . . . knowing how to carry on a war with little expense, and to subsist by their conquests, could not be defeated by financial manoeuvres. As the north wind bends the tender reed, that people would be seen to subjugate their neighbours, and overthrow their feeble constitutions.'

What a guide, and what a goal, for an impressionable youth, already conscious of an inner urge to great achievement, and encouragingly aware that Guibert's preliminary conditions, for the uprising of the 'one great genius', were in course of fulfilment—through the Revolution. Little imagination is needed to perceive how the book's political bent would attract such a reader to its military teaching, and how the prophecy would impel him to accept a theory of war that was so clearly framed with a view to the properties that the Revolutionary armies possessed—through Guibert's endowment, supplemented by their own nature.

To translate that theory into living fact, executive genius was needed. Napoleon possessed it, and this was his distinctive contribution to the new war-

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fare of mobility—mercury-like mobility. Nor was this all. Execution was dependent upon understanding. The new wine of Bourcet and Guibert had been poured into other generals of the Revolution. But they were old bottles. And comparison of their campaigns with those of Bonaparte shows how their thought was apt to be fuddled by the dregs of an earlier theory of war, which clung to them from past indoctrination.

In happy contrast, for the new France and the new theory, the impressionable and inquiring mind of the youthful Napoleon Bonaparte had been brought into contact with the new school of thought at Auxonne at the very outset of his career, before he had been soaked in the ideas and conventions of the old régime of war. And he had remained under the influence of the du Teils until he was launched on his executive task. Then, as a third element of good fortune, he was assigned for his task the very area in which Bourcet had worked out the new theory experimentally—and for which, with that experience gained, Bourcet had drawn up a finished design ready for production. Thus it happened that for a youth prepared for command as Napoleon had been, to don the mantle of Bourcet was the natural complement of assuming the sceptre of command.

The coinciding act was the signal for the translation of the new theory into practice in conditions

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that fulfilled the requirement. Already, in order to obtain food from the countryside, the newly organized divisions of Guibert's model had become accustomed to spread out so widely as to appal the conventional strategist. Already, experience had shown that the dangers of dispersion were far less than formerly, owing to the rapid marching and increased resisting power of such divisions, and also because they were such fluid targets. Already, instinct had led the soldiers of the Revolution to fight in semi-guerilla fashion, and experience of their undisciplined ways had taught their officers the wisdom of avoiding ranged battles, and to guide their instinct so that a quantity of small combats had a collective effect, like a flood crumbling an embankment. These serial actions began to take the place of the old-style one-column battle.

It was left for Napoleon to give a fresh extension to this tendency by applying it in the wider sphere of strategy, and by causing divisions to act in the theatre of war as battalions were acting on the field of battle. That extension was made effective because such combination of the divisions was carried out on a system—a system that Bourcet had invented to suit the topographical conditions, and that Guibert had advocated to suit the human conditions, in which Napoleon had now to act.

The need for distraction, to create the disorganization and demoralization necessary to paralyse the

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enemy effectively, before attempting a decisive blow, had always been understood by the masters of the art of war. But hitherto they had only been able to produce distraction by prolonged manœuvring or subtly conceived ruses. The possibilities of offensively inspired dispersion, of dispersing one's own forces to prevent the enemy's concentration, had not been explored or exploited.

Such *organized dispersion* had to wait for organic dispersion, for the divisional system, as well as for improved firearms, before it became practicable and secure. It had also to wait for a mind capable of grasping its advantages, for a man with the power and the courage to apply them, and for conditions of supply which enabled its full value to be drawn. It found the first in Bourcet, primarily; the second, in Napoleon, and the third in the French Revolution. Then the net could be woven—a net wide enough to stretch over a theatre of war. It proved wide enough to swallow all the armies of Continental Europe in turn—armies that were like a clumsy *secutor* in the ancient gladiatorial arena.

But it was not enough for Napoleon, the *retiarius*, to possess a net. He had need of a trident for the decisive act. And he found it in his hand when he emerged into the arena. One prong had been forged when Saxe developed the use of skirmishers to pave the way for the assault. Another prong had been added when Gribeauval created mobile field artil-

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lery, and thinkers like Guibert and du Teil pointed the method of using it concentrated against the enemy's weak spots. A third prong was formed by the rear manœuvre, the idea of moving the army as a grouped whole on to the enemy's rear and placing it astride his communications. There was a gulf between such wide manœuvres 'in bulk', and the normal outflanking of the enemy or the separated manœuvres of a detachment on to his rear. It is true that idea of the manœuvre in bulk was not altogether new. It had been used, for example, with deadly effect by Cromwell. But it was new in application to the magazine-chained armies of the late eighteenth century, which had so long a tail that they could not safely turn about.

With the development of the net and of this trident, a vital change was wrought in the conditions of warfare. They opened new possibilities for mobility. They enabled the user to apply what an exiled French royalist aptly christened 'the theory of the impossible'—the repeated achievement of surprise by performing what the enemy believed to be impossible.

Nevertheless, we must not lose sight of the fact that they themselves were only means to mobile action. For their value to be realized, they had to be used with mobility—which depended on the user being inspired by a spirit of mobility. Napoleon was inspired. Thus he infused mobility into the new

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means that others had created. We do not dim his credit, however, if we recognize that his vision of mobility was not merely inborn, but the fruit of his military heredity. He had breathed the spirit of Guibert, who stands out clearly as the prophet and inspiration of the new mobility in war.

*Distortion**The System that Wrecked Europe*

THE movement of military thought took a new direction in the nineteenth century. New when compared with the movement that Saxe, Bourcet, and Guibert had generated for Bonaparte's application. Yet in reality an old direction. For it was a movement in reverse, a swing of the pendulum back to immobility. And it was due to the addition of a weight, the weight of a new theory of mass, without due care to preserve a true balance. Thus gathering exaggerated momentum, unsuited to its environment, the pendulum would continue with fatal force until it crashed on the hard realities of 1914 and buried itself in the ruins of a Europe that it had wrecked.

As this world catastrophe, in its course, and even in its cause, can be traced to an unbalanced theory of war which hypnotized the dominant minds of Europe, so that theory itself can be traced to Napoleon's practice, although it was left to another man to formulate the theory and become the ill-omened

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prophet of mass. But the substance of it can be seen in Napoleon's campaigns, in his campaigns as Emperor. Indeed, the difference between the system to which he was the fortunate heir, and the theory which became his legacy, might be expressed by drawing a distinction between Bonaparte and Napoleon. General Bonaparte applied a theory which created an empire for him. The Emperor Napoleon developed a practice which wrecked his empire. And, a century later, evolved by Clausewitz into a system, it brought down three other empires in collapse.

From 1806 onwards the superiority of numbers which Napoleon enjoyed, from the immense resources of imperial power, had a growing influence on his conduct of war. If he still exploited mobility he unconsciously pinned his faith to mass, and subordinated his art to his weight. In his campaigns after Jena he seems too exclusively concerned with battle, too ready to rush at his opponents, confident that his machine will crush them if he can only bring them to battle. His victories are won less by mobility and surprise than by sheer offensive power, expressed in his new artillery tactics—the massed concentration of guns to blast a selected point. And at Eylau he suffered a check, at Aspern a defeat.

His victories, moreover, were purchased at a cost which caused an increasing drain on his material balance. And this can be traced to the effect of in-

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toxicating success on his mental balance. By giving him a blank cheque on the bank of man-power, imperial power led him into an extravagant way of war. In 1813 his bankruptcy was declared; and in 1815, in debt again, he was sent to serve his sentence at St. Helena.

He paid the penalty for violating the law of economy of force, to which mobility and surprise are the means. The new mobility, as conceived by Guibert, had certainly the purpose of concentrating superior strength against the opponent's *weak* points, to the end that they should become *decisive* points. But it was abused when employed merely to form a superior mass—in other words, to multiply numbers at unweakened points.

The true virtue of the power of mobile concentration lay in its fluidity, its variability, not in its density. It meant the power to shuffle a pack deftly so that a trump could always be produced at the desired point, and not merely a quickened power to assemble a hand. But Napoleon had tended increasingly to forget his old sleight of hand and to rely on the hand that fortune dealt him, trusting in the mere strength of his cards. Thus he lost points and finally the rubber.

But the lesson was lost on posterity, blinded by the glamour of his colossal gamble. The original Napoleonic system was obscured by the Napoleonic legend. And the chance of its true outlines being

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perceived was lessened by the subtly distorted lenses through which subsequent students of war gazed on the work of the master.

One of these lenses was provided by Napoleon himself, so intent at St. Helena to explain his actions in the light of subsequent reflection, and to impress on posterity that he was militarily a lineal descendant of Cæsar, Turenne and Frederick. Occasionally, however, he indulged in confessions nearer the truth, as when he declared—‘I have fought sixty battles and I have learned nothing which I did not know at the outset.’ For then his knowledge of the theory of Guibert, Bourcet, and du Teil had been as thorough, as his acquaintance with the campaigns of the Great Captains had been slight. But he preferred to acknowledge masters for whom no one would be likely to claim a share of his fame.

The other distorted lenses were provided by his disciples, and especially by those who guided the post-Napoleonic movement of military thought. Among those who claimed to interpret Napoleon’s methods, two men were outstanding, Jomini and Clausewitz. And by the irony of fate, due to a subsequent turn of history, the more faithful of the two interpreters was eventually eclipsed by the other. It was Clausewitz, an original thinker with a Napoleonic tinge, whose thought moulded the mind of the generals and statesmen who made war in 1914, not Jomini, the actual assistant of Napoleon.

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The contrast between these two great theorists of war recalls that between Bourcet and Guibert. For Jomini was essentially a scientific technician, while Clausewitz was a philosopher of war. But although both surpassed their predecessors in range of thought, both had a bias that impaired the justness of their reflections. Jomini suffered by being too geometrical; Clausewitz, by being too metaphysical. The latter fault was the greater in effect. For while Jomini's bias could be corrected by anyone who followed his clear exposition, Clausewitz was so difficult to follow that his emphatic generalizations made more impression than his careful qualifications.

I. The Pillar of 'Sound' Strategy

Antoine Henri Jomini was of Swiss origin, being born in the canton of Vaud in 1779. Like some of the most ardent students of war, he came of unmilitary parentage, and his own youthful desire to follow the profession of arms was temporarily frustrated by the disbandment of the Swiss regiments in the French service. Reluctantly, he became a clerk in a Paris banking house, but was rescued by the outbreak of revolution in Switzerland, and at twenty-one was commanding a battalion. The peace of Lunéville condemned him once more to a desk, but he used this chiefly to write a textbook on war, and in 1804, when only twenty-five, he sprang into fame

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with his *Traité des grandes opérations militaires*. It is interesting to observe how young some of the greatest military writers have been when they made their names, and significant also that such developments have followed upon an opportunity of practical war experience at an impressionable age.

Jomini's military ideas became a passport to Marshal Ney's interest, and he was invited to accompany Ney in the campaign of 1805, as a volunteer aide-de-camp. Later in the year, Napoleon was also impressed by reading Jomini's book, and showed his practical recognition of its value by giving Jomini a colonelcy in the French army. Shortly afterwards, when war with Prussia was in sight, Jomini published his views as to the conduct of such a war. When it came, Napoleon took the opportunity to profit by Jomini's insight, as well as his historical knowledge, and appointed him to his own staff.

Jomini's services proved so valuable during the campaign that after the peace of Tilsit he was not only made a baron by Napoleon, but offered a post by Napoleon's late enemy, the Emperor of Russia. Napoleon refused to part with Jomini's services, made him a general of brigade—at twenty-eight—and even agreed to let him retain the commission in the Russian army. For a military writer to find two emperors making a partnership agreement for joint rights in his person was certainly a remarkable ex-

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perience—and a remarkable tribute. But it earned him the bitter jealousy of smaller men, especially Marshal Berthier, Napoleon's chief-of-staff. For such men, always, are more anxious to vent their spite, and to spike a possible rival, than to help their country.

In 1808 Jomini went to Spain as Ney's chief-of-staff, but his advice was too good to be palatable, and before long he parted from his headstrong chief. The breach was the opportunity of his enemies, and his position became still more difficult when war broke out between France and Russia, for his scruples forbade him to take an active part in the invasion. When Prussia, however, rose in arms against Napoleon, Jomini rejoined Ney, and as his chief-of-staff rendered valuable service in the 1813 campaign. But Berthier was watchful. He not only erased Jomini's name from the list of officers recommended for promotion, but seized on a trivial pretext—the omission to render certain returns—to put him under arrest and censure him in army orders.

This evidence of unappeasable enmity in high quarters convinced Jomini that it was useless to remain in the French service, and during the armistice he transferred to the Russian, where he was made a lieutenant-general and appointed aide-de-camp to the Emperor. As a Swiss there was no call of patriotism to restrain him from serving against the French, and as a student of strategy he pursued

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his experimental research with a purely scientific enthusiasm.

But his personal integrity and innate loyalty were shown in 1814, when he withdrew from the Allied army because it trespassed on Swiss territory. And in 1815, when the triumphant Allies occupied Paris, he endangered his own position in the Russian army by his efforts to save Ney from execution. Then, after taking part in the Congress of Vienna, he devoted himself to military writing for several years, until recalled to act as military tutor to the Tsarevitch. This position of influence enabled him to lay the foundations for a Russian Staff College. He went on active service once more in the Russo-Turkish War of 1828, but retired a year later and settled in Brussels, where he produced his famous *Précis de l'art de la guerre*, for two generations the most esteemed of all books on war. Its partial eclipse subsequently was due to the triumph of the Clausewitz-nourished German army in 1870, and there is an air of prophetic coincidence in the fact that Jomini himself died on the eve of that war, at the age of ninety.

A large proportion of the *Précis* stands the test of changing times. It still remains a remarkably clear definition of the various types of war, and exposition of the differences which should affect the conduct of each type. Jomini was not blinded by the post-Napoleonic worship of unlimited force regard-

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less of the end, and of the dividend. He pointed out that, in wars where a profit was sought, 'offensive operations should be proportioned to the end proposed'. And he significantly remarked in comment on Napoleon's later career—'One might say that he was sent into this world to teach generals and statesmen what they ought to avoid.'

Jomini likewise qualified his approval of Napoleon's strategic purpose. He praised Napoleon for breaking away from the old point-winning convention, and for perceiving that 'the first means of doing great things was to strive, above all, to dislocate and ruin the enemy army; certain that states and provinces fall of themselves when they have no longer organized forces to cover them'. But, with the Russian and Spanish campaigns stamped on his memory, Jomini emphasized that the pursuit of this object must be governed by the conditions. His own moderate view was that 'the excessive abuse which Napoleon made of this system does not destroy the real advantage that it offers, so long as one knows how to put a limit on one's successes, and to set one's enterprises in harmony with the respective condition of the neighbouring armies and nations.'

If European military thought had continued under the influence of Jomini, the nations of Europe would hardly have pursued mutual destruction so thoughtlessly in 1914-1918.

They might still have reached stalemate. For the

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real fault of Jomini's teaching was its failure to set in correct focus the conditions of mobile war. Thus the historical interest of his writings lies, above all, in tracing their subtle deformation of the theory that Bourcet and Guibert had created for Napoleon's application.

Jomini defined 'the fundamental principle of war' thus—'It consists:

'1. In carrying by strategic combinations the mass of the forces of an army successively on the decisive points of a theatre of war, and as far as possible upon the enemy's communications without endangering one's own;

'2. In manœuvring in such a manner as to engage this mass with fractions only of the enemy's army.

'3. In directing equally . . . by tactical manœuvres the mass of one's forces upon the decisive point of the battlefield, or upon that part of the hostile line that it is important to overwhelm.'

That simple definition contained a profound truth, but was too simple to convey the truth adequately. And, in Jomini's elaboration of it, error crept in, through a faulty distribution of emphasis—on massed instead of on surprise effect; on geometry instead of on mobility.

The error became more perceptible in his concise definition of the principle as 'the art of putting into action the most possible forces on the decisive point'. By dropping out that key word, the adverb

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'successively', the vital idea of fluid concentration drops out of sight, and is replaced by the picture of a concentrated mass—which can be met by a concentrated enemy.

But even the fuller definition, and its elaboration, fail to bring out the fundamental fact that a point only becomes decisive when its condition permits you to gain a decision there. For this to be possible, it must be a weak point relatively to the force you bring against it. And the real art of war is to ensure or create that weakness. Distraction in one form or another is the most effective instrument, and mobility is its mainspring.

But Jomini was little concerned either with generating mobility or with immobilizing the enemy. He was too interested in the form of operations to see the need of injecting the vital fluid into them. He filled pages in discussing bases of operation, zones of operation, lines of operation, fronts of operation, objective points, strategic points, manoeuvre lines, interior lines, eccentric and concentric operations—all with an abundance of geometrical diagrams. He showed the properties, advantages, and disadvantages of each. But he did not give due reflection to the fact that an advantageous line of operation depends for its effect on the enemy being unable to block it—which depends on distraction. And he took too little account of the moral weight of the unexpected.

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The limitations of Jomini's outlook are revealed in his brief section on the use of diversions and detachments, which he describes as an 'inconvenience', sometimes necessary, but seductively dangerous. His attitude is that of an orthodox eighteenth-century strategist, and it shows that he had missed the essential value of the Napoleonic system—the surprise value of that wide-stretched, waving net. Perhaps his oversight is to be explained by the fact that he had only witnessed the later campaigns of Napoleon, where mass predominated even if manœuvre persisted.

Jomini's comments on the divisional system tend to confirm this surmise, for he regards the organization of the Grand Army as a step towards minimizing the hazardous dispersion of the original model. Jomini recognizes that Bonaparte 'remedied this inconvenience . . . by the mobility and rapidity of his manœuvres', but fails to see that it was *owing* to apparent dispersion, to wide distribution, that Bonaparte compelled the dispersion of the enemy's forces and created the opportunity for a decision.

Jomini, moreover, crystallizes the essential fluidity of the Napoleonic grouping into a more or less stereotyped form—an army organized in two wings, a centre and a reserve. In the army of Italy every division had constituted a floating reserve to the others, so long as it was not actually engaged. Instead of a subtracted reserve, Bonaparte had re-

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lied on the potential reserve promised by his internal mobility.

Jomini's thought had really gone back past Bonaparte to Broglie—to a body with semi-rigid arms instead of a group of quicksilver blobs. And he helped to fix this picture on the mind of his readers by a diagram of geometrical rigidity, which showed lines of divisions arranged side by side in adjacent corps compartments. It was only too exact a picture of how divisions and corps would move and fight in 1914-1918—as if running on parallel rails, pushed by shunters in the garb of strategists.

In justice to Jomini one should point out that his mathematical treatment of war was characteristic of the age, and that he did not press it to such extremes as other writers. Bülow, for example, abounded with such axioms as that:

'There can be no security for an operation until the enemy is driven outside a semi-circle, the centre of which is the most central subject, and the radius of which is equal to the length of the line of operations.' To prove this somewhat obscure axiom, Bülow demonstrated that 'the angles of the periphery of a circle, which have the diameter for opposite side, form right angles', and that in consequence the angle of ninety degrees required by him for lines of operations was the only rational system!

Jomini himself saw the fallacy of 'making war trigonometrically', and pointed out that 'the nature

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of the country, the lines of rivers and mountains, the moral state of the armies, the spirit of the people, the capacity and energy of the chiefs, are not measured by angles, diameters, and peripheries'. He gave examples to show that Napoleon had successfully violated such formulæ, and remarked 'the explanation is simple, it is that war is an impassioned drama, and by no means a mathematical operation'.

Yet by his fondness for geometrical terms and diagrams, as well as by his inattentiveness to surprise and mobility, he unintentionally distorted the outlook of his pupils. In his exposition, the mathematical aspect of strategy obscured the psychological basis of war. Despite his own good sense, based on personal experience, he made strategy appear a science of lines and points to pupils who lacked his experience of war.

Worse still, he focused their eyes on a single objective point. His teaching shows no sign that he had recognized the vital significance of Bourcet's argument that every plan ought to have branches, so that if one line is blocked by the enemy, another may be instantly developed to serve the same purpose. No theory of war could be adequate which overlooked that principle.

For war is a two-party affair. Thus, to be practical, any theory must take account of the opposing side's power to upset your plan. The best guarantee

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against their interference is to be ready to adapt your plan to circumstances, and to have ready a variant that may fit the new circumstances. To keep this elasticity while still keeping the initiative, the best way is to choose a line originally which offers alternative objectives. A single objective simplifies the enemy's problem and complicates yours. For once the enemy is certain as to your point of aim he can concentrate to cover it. If, in contrast, you take a line that offers alternative objectives, you set up a tug-of-war in his mind and stake rival claims upon his forces—without the need of dividing your own. Hence, a line of operation which affords variability of objective is the most economic as well as the most effective form of distraction. If Jomini dimmed the light that Napoleon's campaigns had shed by his inadequate emphasis on mobility, he shut off the light from one essential pane when he fixed the mind of his pupils on a single objective.

Jomini also lost sight of reality in some of his tactical teaching. Up to a point he recognized the influence of fire, and even had a dim vision of its future growth, as when he remarked—'happy will be those who in the first encounters shall have plenty of shrapnel howitzers and many breech-loading guns, firing thirty shots a minute'. He also admitted that, except in villages and defiles, he had never seen two forces cross bayonets. But he deprecated the 'exaggerated conclusions' which were

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being drawn by some observers of the tide of mechanical invention—notably General Okounieff, who made a forecast which now reads like an ordinary account of 1918 artillery tactics.

Despite his sympathetic interest in the development of new fire weapons, Jomini remarked—‘I own that I should have difficulty in conceiving a better system for leading infantry to the assault of a position than that of the column by battalions.’ That he had missed the deepest tactical lesson of the Napoleonic wars is shown by his comment—‘the skirmishers made the noise, but the columns carried the position’. And although careful to point out the dangers to which ‘very deep masses’ were exposed, he thought that a reduction in the size of columns would be safer than a more dispersed formation. For security, he preferred that tactical formations, like strategic dispositions, should be ‘compact’.

Jomini, in fact, can be summed up in a phrase—as an advocate of *safety first*, always so careful to eschew risks of defeat that he lent himself to the more certain risk of failure to achieve a result. His teaching showed soldiers what to avoid, but not how to succeed—when they passed from a one-sided lecture to a two-sided war. His thought moved with the changing times, but so cautiously that it could not keep pace with the rate of change. He was a monument of soundness, and remains a

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memorial to the missing—the missing element of surprise.

The practical limitations of his teaching were illustrated in the American Civil War. The most studious general in either army was Halleck, whose mind had been nourished on Jomini. Yet in practice Halleck proved perhaps the most ineffective pedant who ever commanded armies, a general whose paralysing hand produced stalemate wherever he directed. Another pupil was Sherman, and it can be seen that his knowledge of textbook lore at first handicapped him in comparison with Grant, a man of unlettered and unfettered common sense. Sherman's development was delayed until he had gradually freed his mind from theoretical bonds, and learnt from experience to pursue the unexpected instead of the orthodox. Then, his superior intellect enabled him to produce and practise a theory of his own which decided the war, and in which, significantly, his strategic aim was to place the enemy 'on the horns of a dilemma' by having alternative objectives. But there was a final irony in the fact that Sherman's war-winning manœuvre through Georgia and the Carolinas against Lee's rear was delayed through Halleck's influence—an influence exerted upon the side of what is miscalled 'sound strategy'. When the next great war came, in Europe, Jomini's influence had been to a large extent sup-
planted. Not through profitable attention to the

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lessons of the American Civil War, which were foolishly ignored, but through the rise of a fresh influence. For the war of 1866, like that of 1870 which followed close on its heels, was fought under the star of Clausewitz, whose teachings had moulded the minds of the victorious German soldiers. And by this apparent evidence of their truth his teachings would subsequently form, and deform, the thought of military Europe as a whole, in the half-century which preceded the World War.

2. The Mahdi of Mass

Born the year after Jomini, Karl von Clausewitz was a Prussian of Polish origin. He saw war before he received education. Entering the army at the age of twelve, he gained a commission at the siege of Mainz two years later. He used the opportunity to develop his own education, and in 1801 gained admittance to the Berlin Academy for Officers, where he became a favourite pupil of Scharnhorst. As a result he was appointed aide-de-camp to Prince August, but his rise to fortune was imperilled by being taken prisoner in the Jena campaign. Released, however, in 1809, he became Scharnhorst's assistant in reorganizing the Prussian army, as well as being made military instructor to the Crown Prince.

But when war broke out between France and Russia in 1812, Clausewitz joined the Russian

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army, and shared in its prolonged withdrawal. When the French in turn withdrew from Moscow, Clausewitz negotiated the convention of Tauroggen, by which Yorck's Prussians separated themselves from the French, and later organized the Landwehr in East Prussia. But it was still as an officer in the Russian service that he took part in the campaign of 1813, and it was only after Napoleon's abdication that he rejoined the Prussian army. During the Waterloo campaign he was chief-of-staff to Thielmann's corps.

In 1818 he was promoted major-general and made director of the Prussian War School. There he worked both at theory and teaching for twelve years, and among his pupils was the future director of Prussia's military fortunes in 1866 and 1870—Helmuth von Moltke. In 1830 Clausewitz became chief-of-staff to Gneisenau, commanding the army on the Polish frontier. But in the following year both he and his chief fell victims to cholera and died.

But his work was virtually completed when his life was cut short. Not only his work in forming young minds at the war school, but the work which would extend his influence far wider and further. This, his great theoretical work *On War*, was published by his widow, as well as seven other volumes on historical campaigns.

His post as director of the war school had given him the leisure to think out his theory of war, and to

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express his thoughts, first in a loose series of jottings, and then expanded into chapters. As he said himself—‘my ambition was to write a book that would not be forgotten in two or three years’. His ambition was fulfilled posthumously far better than he could have dreamed.

After his sudden death, his writings were found in sealed packets, with the significant and prophetic note—‘Should the work be interrupted by my death, then what is found can only be called a mass of conceptions not brought into form . . . open to endless misconceptions. . . Still, despite this imperfect form, I believe that an impartial reader . . . will find in them some leading ideas which may bring about a revolution in the theory of war.’

That revolution was certainly achieved. Although Clausewitz used Napoleon freely as an example, and came to be taken by the world as the interpreter of Napoleon, he really expressed ideas that originated in his own mind. He was the prophet, not of Napoleon, but of himself. If one weighs his influence and his emphasis, one might describe him historically as the Mahdi of mass and mutual massacre.

For he was the source of the doctrine of ‘absolute war’, the fight to a finish theory which, beginning with the argument that ‘war is only a continuation of state policy by other means’, ended by making policy the slave of strategy.

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Clausewitz ridiculed the idea that 'there is a skilful method of disarming and overcoming an enemy without great bloodshed, and that this is the proper tendency of the Art of War'. He declared that such an idea existed only in the imagination of 'philanthropists', and that it was 'an error which must be extirpated'. It did not occur to Clausewitz that such an idea might be dictated by enlightened self-interest, by a desire to draw profit from war, not merely a gladiatorial decision. Nor did he pause to reflect that this idea had inspired the past masters of the art of war, who had translated it into practice with profit to their cause. Yet it is strange that he did not perceive that he was contradicting himself. For if war is a continuation of policy, it must necessarily be conducted with a view to post-war benefit. A state which expends its strength to the verge of exhaustion makes its own policy bankrupt.

Clausewitz looked only to the end of a war, not beyond war to the subsequent peace. This shortsightedness is palpable in his assertion that 'he who uses force unsparingly, without reference to the bloodshed involved, must obtain a superiority if his adversary uses less vigour in its application. The former then dictates the law to the latter, and both proceed to extremities, to which the only limitations are those imposed by the amount of counteracting force on each side.'

'To introduce into the philosophy of war a prin-

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ciple of moderation would be an absurdity. War is an act of violence pushed to its utmost bounds.'

Clausewitz's principle of force without limit and without calculation of cost fits, and is only fit for, a hate-maddened mob. It is the negation of statesmanship—and of intelligent strategy, which seeks to serve the ends of policy.

It was Clausewitz also who developed, if he did not generate, the idea that the destruction of the enemy's armed forces was the only true object of strategy. He made it a dogma without meaning to do so—carried away by his passion for pure logic.

'The aim of all action in war is to disarm the enemy, and we shall now show that this, in theory at least, is indispensable. If our opponent is to be made to comply with our will, we must place him in a situation which is more oppressive to him than the sacrifice we demand; but the disadvantages of this position must naturally not be of a transitory nature, at least in appearance, otherwise the enemy, instead of yielding, will hold out in the hope of a change for the better. Every change in this position which is produced by a continuation of the war must, therefore, be a change for the worse. The worst condition in which a belligerent can be placed is that of being completely disarmed. If, therefore, the enemy is to be reduced to submission . . . he must either be positively disarmed or placed in such a position that he is threatened with it. From this it follows that

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the complete disarming or overthrow of the enemy . . . must always be the aim of warfare.'

Clausewitz had sufficient common sense, and historical sense, to recognize what he termed a 'modification in the reality'. 'Reasoning in the abstract, the mind cannot stop short of an extreme, because it has to deal with an extreme, with a conflict of forces left to themselves.' 'But', he confessed, 'everything takes a different shape when we pass from abstractions to reality.' 'This object of war in the abstract, this final means of attaining the political object in which all others are combined, *the disarming of the enemy*, is rarely attained in practice and is not a condition necessary to peace.'

He also qualified his principle of 'utmost force' by the admission that 'the political object, as the original motive of the war, should be the standard for determining both the aim of the military force and also the amount of effort to be made'.

Unfortunately, his qualifications came on later pages, and were conveyed in a philosophical language that befogged the plain soldier, essentially concrete minded. Such readers grasped the obvious implication of the leading phrases, and lost sight of what followed owing to distance and obscurity.

In justice to Clausewitz one must draw attention to his reservations, but for true history one must concentrate attention on his abstract generalizations, because it was the effect of these that influenced

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the course of European history.

Moreover, Clausewitz himself had a direct as well as an indirect responsibility. For while he saw the limitations which reality placed upon the abstract ideal, he tended to set up the latter as his ideal in the actual conduct of war. He seemed to think that, by pursuing the extreme, a commander would come nearest the practical mean. The result, however, was that in exalting logic he dethroned reason and encouraged his disciples to break away from reality. Perhaps the harm might have been avoided if his book had been viewed in the light that its title strictly implied—as a treatise on the nature of war, instead of as a practical guide to the conduct of war.

Clausewitz's tendency to the extreme is shown, again, in his discussion of battle as a means to the end of war. He opened with the startling assertion—'There is only one single means, it is the fight.' He justified this by a long argument to show that in every form of military activity 'the idea of fighting must necessarily be at the foundation'. Having elaborately proved what most people would be ready to accept without argument, Clausewitz then admitted that 'the object of a combat is not always the destruction of the enemy's forces', and that 'its object can often be attained as well without the combat taking place at all'. Thus 'a whole campaign may be carried on with great activity without the actual combat playing any notable part in it, as

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military history proves by a hundred examples'.

Clausewitz recognized that 'against the far superior value which the destruction of the enemy's armed forces has over all other means, stands the expense and risk of this means'. He confessed that 'the waste of our own military forces must, *ceteris paribus*, always be greater the more our aim is directed upon the destruction of the enemy's power. The danger lies in this—that the greater efficacy which we seek recoils on ourselves, and therefore has worse consequences in case we fail of success.'

Out of his own mouth, Clausewitz here gives a prophetic verdict upon the consequences of following his own gospel in 1914-1918. For it was the ideal, and not the practical, aspect of his teaching on battle which survived. He contributed to the distortion by arguing that it was only to avoid the risks of battle that 'any other means are taken'. And he fixed the distortion in the minds of his pupils by hammering on the abstract ideal.

Not one reader in a hundred was likely to follow the subtlety of his logic, or to preserve a true balance amid such philosophical jugglery. But everyone could catch such ringing phrases as—'We have only one means in war—the battle.' 'The combat is the single activity in war.' 'We may reduce every military activity in the province of strategy to the unit of single combats.' 'The bloody solution of the crisis, the effort for the destruction of the enemy's

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forces, is the first-born son of war.' 'Only great and general battles can produce great results.' 'Let us not hear of generals who conquer without bloodshed.'

By the reiteration of such phrases Clausewitz blurred the outlines of his philosophy, already indistinct, and made it into a mere marching refrain—a Prussian '*Marseillaise*'—which inflamed the blood and intoxicated the mind. In transfusion it became a doctrine fit to form corporals, not generals. For, by making battle appear the only 'real war-like activity', his gospel deprived strategy of its laurels, reduced the art of war to the mechanics of mass-slaughter, and incited generals to seek battle at the *first* opportunity, instead of creating an *advantageous* opportunity.

Clausewitz's greatest contribution to the theory of war was his elucidation of the moral sphere. Raising his voice against the mathematical school, he showed that the human spirit was infinitely more important than lines or angles. He discussed the effect of danger and fatigue, the value of boldness and determination, with deep understanding. And there are pages of Clausewitz which show that he appreciated far better than Jomini the importance of surprise and the moral effect of the unexpected. 'It lies', he declared, 'more or less at the foundation of all undertakings, for without it the preponderance at the decisive point is not properly conceiv-

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able.' Here we have another phrase that his twentieth-century disciples would have done well to remember.

Yet he himself obscured the truth by his fondness for striking definitions, without immediate qualification, and often involved himself in contradictions. Thus, in discussing past theory he laughed at those who were inclined 'to see the whole secret of the art of war in the formula in a certain time, at a certain point, to bring up superior masses'. And he justly remarked that this 'was a restriction overruled by the force of realities'. Yet elsewhere he indulged in such banal aphorisms as—'The best strategy is always to be very strong, first generally, then at the decisive point.' And he narrowed the purpose of strategy when, ignoring his own qualifications, he defined it as 'the employment of battle as the means towards the attainment of the object of the war'.

Worse still was the effect of his dictum—'there is no more imperative and no simpler law for strategy than to keep the forces concentrated—no portion is to be separated from the main body unless called away by some urgent necessity. On this maxim we stand firm.' It shows only too clearly that he regarded strength as a matter of solidity, and had missed the essential point of the Napoleonic system. He still thought in terms of *physical concentration* instead of *potential unity*—of a block system instead of a net system. Indeed, there is no sign throughout his

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book that he had grasped the value of Napoleon's elastic grouping and wide distribution as a means to distraction.

But it was not only in the sense of massed formation that Clausewitz was the advocate of mass. It was also in the sense of masses, or hordes. Despite his qualifications, he gave a supreme emphasis to mere superiority of numbers. 'We may be sure that, in ordinary cases, in small as well as in great combats, an important superiority of numbers . . . will be sufficient to ensure the victory.' 'It is to be regarded as the fundamental idea, always to be aimed at before all.'

Here again we can trace the effect of Clausewitz's mental concentration on the campaigns of Napoleon, rather than those of Bonaparte, as well as the effect of his own share in the final overthrow of Napoleon by superior numbers.

Clausewitz's view was certainly influenced by the absence of any important change in the arms, equipment and tactics of armies during the forty years from 1790 to 1830. His view may be considered a legacy of Napoleon's uncreativity—a legacy of fateful consequence. For, on the very threshold of the mechanical age, it led Clausewitz to declare—'An unbiassed examination of modern military history leads to the conviction that *superiority in numbers becomes every day more decisive*; the principle of assembling the greatest possible numbers

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may therefore be regarded as more important than ever.'

Through Clausewitz it would become more important than all else in the thought of the European military chiefs. Under his influence, they would neglect to develop the latent superiority that mechanical invention increasingly offered. Only with reluctance would they accept the new tools forced on them by civil progress, causing an immense and needless time lag between their invention and provision. That time lag caused the needless massacre of millions. So did the fact that for a century the soldiers of Europe would cling to Clausewitz's delusion that 'the close combat, man to man, is plainly to be regarded as the real basis of combat'. Even in the twentieth century the generals would train their masses for the bayonet-fight which Guibert, in the eighteenth century, had pointed out as a fantasy of theorists. In reality it meant that they were training their masses to be massacred by machine-guns. Not merely stalemate, but massed suicide—more truly, homicide—was the penalty of Clausewitz's theory of mass. What a cost for divorcing theory from reality!

Yet if the responsibility lies heaviest on Clausewitz, those who accepted his theory without examination, in times when new weapons were multiplying, are more blameworthy. Let us note how the fetters of his theory were fastened round the arms and legs of Europe.

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3. The Enslavement of Reason

Clausewitz's emphasis on the moral element appealed to the new spirit of Prussia. And his doctrine of mass suited the numbers which the Prussian system of national service made available. Most important of all, Clausewitz's old pupil, Moltke, became the directing mind of the Prussian army, and used him as a stamping-press in the production of future commanders and staff officers. Moltke was sufficiently responsive to changing conditions, especially the increasing effect of fire, to modify Clausewitz's theory in parts. He was led to distribute his army in a chain of grouped corps and to seek the decision by envelopment.

Even so, there was a fundamental difference of view between the senior Prussian officers, who trusted in mass to decide the issue, and the junior, who had more faith in the infantryman's new breech-loading 'needle-gun', which had been adopted after strong opposition from their seniors.

The war of 1866 justified the juniors. For Prussia's rapid victory owed at least as much to the superiority given by the breech-loader as to Moltke's strategy in using masses. The Prussian infantry, able to fire lying down, found an easy target, because a standing target, in the Austrians armed with a muzzle-loader.

In the war of 1870 weapon-superiority had shifted to the opponents of Prussia. But this French advan-

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tage was falsified by defective training as well as by stupid leadership. Weapons mean little unless troops know how to handle them effectively. Thus superior numbers had their opportunity and pressed it home by superior mobility. To quote a sage commentator—‘The operations which led to the capture of MacMahon’s army at Sedan call for little explanation. Given seven corps, each capable of averaging fifteen miles a day for a week in succession, opposed to four corps only . . . unable as a whole to cover more than five miles a day, the result could hardly be doubtful.’

Yet this easy triumph had some ominous shadows. There was an utter failure to pin down the French, who preserved their freedom of movement, and had ample opportunity for dangerous ripostes—only to be paralysed by the indecision of their own generals, and the breakdown of their staff work. Again, the German masses suffered a terrible lesson at Gravelotte in the effect of modern fire, although the lesson was not digested except by the junior officers who experienced it at first hand.

But the military world, guided by superficial appearances, became lost in admiration of the victorious army and its methods. The wave of Prussian imitation that had followed 1763 was repeated after 1870. The Prussian army had been nourished on the gospel of Clausewitz, therefore his gospel was right. The Mahdi of mass was hailed by the world

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as the true prophet. And no nation in the end accepted him more blindly than the French—all the more easily because they were able to persuade themselves that he was the prophet of Napoleon. In their fervour for his gospel they excommunicated such of their budding leaders as dared to be heretics.

No Guibert emerged to oppose the doctrine of mass with a new call for mobility, attuned to modern conditions. Instead, a Captain Gilbert arose, who found a too simple explanation of the 1870 disasters in the fact that the French had not taken the offensive. Ignoring the fact of modern weapons, he appealed to the wounded vanity of his countrymen by a ringing call to revive the *furia francese*, and by his implicit assurance that it would prove irresistible no matter what bullets might say. Gilbert, who was a classmate of Joffre's at the Polytechnique, had come to be regarded as the destined chief of his generation when disease cut short his army career. It could not quench his spirit or his power. He would still be the man of destiny, even though he exchanged the sword for the pen. By the power of his writings he stamped his impress on the rising generation of French soldiers. His views became those of the French Staff College, and of the Historical Section of the General Staff, which was described by a contemporary as 'only an emanation of him'.

One of those whom he influenced was the future

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Marshal Foch, who became the next link in the chain. Gilbert's influence can be seen in the historical illustrations that Foch used as well as in the way his teachings converged towards 'organizing a shock both supreme and final'. Even Clausewitz had a warning against such a delusory idea. Yet if Foch missed this warning, it was not for want of reading Clausewitz, who in other ways was Foch's chief inspiration. If he borrowed from Gilbert the point that he put on his spear, he took its shaft from Clausewitz.

When appointed a teacher at the French Staff College in 1895, Foch awoke to the shortcomings of his own knowledge. 'What forced me to work at my profession was having to teach it. . . . I asked myself: "What are the elements of war?" I read Clausewitz.' But only a mind already developed by years of study and reflection can dissolve Clausewitz into digestible particles. Critical power and a wide knowledge of history are needed for producing the juices to counteract the Clausewitzian fermentation. Both were wanting in Foch.

An analysis of his books shows only too clearly that he took the philosophical basis of his theory of War direct from Clausewitz without discrimination. Thus he became an amplifier for Clausewitz's more extreme notes. In his mouth the destruction of the enemy's main army became the *only* means to the end. This ultra-narrow view led him to disregard

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all other forms of pressure, naval and economic. Further, instead of seeing tactics as one of the tools of strategy, he made strategy merely a conduit pipe to tactics. 'No strategy can henceforth prevail over that which aims at tactical results, victory by fighting.' 'Modern war knows but one argument: the tactical fact, battle.'

The course of the World War would prove an ironical commentary on these dogmatic assertions. But it is curious that, even when he made them, he did not see the inconsistency of illustrating his theory by a partial study of the 1796 campaign. For in this campaign, his masterpiece, Bonaparte had actually attained his object without a battle—by strategy so skilful in its use of mobility and distraction that it nullified the need for battle.

It becomes apparent that Foch accepted his theory of war from authority without critical examination. It is true that he told his pupils that they must learn to reason, that they must have 'freedom of mind, no prepossessions'. But he promptly qualified this by saying that they would be taught a theory which 'would not be open to discussion'! To this attitude of mind he was predisposed by his military training, if perhaps also by his religious faith. And he was the less likely to question the Clausewitzian foundations of his military faith because they accorded so completely with his own character, with his passionate conviction of the power of

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faith to overcome obstacles—‘the will to conquer’.

He summed up his faith in a phrase—‘A battle won is a battle we will not acknowledge to be lost.’ But he failed to bring out its logical corollary, that a battle won is a battle we can persuade or delude the enemy he has lost. Hence he gave too little attention to the active use of the moral element, and narrowed down surprise to a mere accentuation of the physical act of concentrating superior force at one point.

Foch followed Clausewitz also in underestimating the material factors, such as armament. He was, apparently, too engrossed in strengthening the morale of the leader to consider how the possession of superior or inferior weapons might affect the morale of the led, and react on the leader. Thus, when war came he himself was taken by surprise. To make matters worse, he arrived, on purely mathematical grounds, at the astonishingly wrong conclusion that ‘any improvement in firearms is bound to strengthen the offensive’. If he had but examined history critically, especially the American Civil War, he would have found ample evidence of the growing power of defence over attack. While looking along the paths pointed out by Clausewitz, Foch failed to watch the ground under foot, with the result that he fell into a ditch—the entrenched ditch that eventually stretched from the Swiss frontier to the English Channel. More unfortunately, he led

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others into it—and with them went the fortunes of France and Britain.

His teaching on the moral side was admirably calculated to fortify the powers of resistance and endurance. But, he was encouraged by his disregard of the material side to become, paradoxically, the advocate of the offensive. And the generation of his pupils, running to extremes as is the way of disciples, exalted the will to conquer into a catchphrase specific of victory.

Foch's influence became paramount when in 1908 he was made Commandant of the French Staff College. And the clamour of his disciples drowned the voices of more realistic students of war, more deeply acquainted with its history, such as Grouard, Mayer and Colin—names that deserve belated honour from a sadder if wiser generation. Indocctrinated with the theory of mass and obsessed with the virtues of the offensive, Foch's disciples came to believe that they had only to attack with sufficient ardour to be certain of conquering.

Most powerful of all, for France, was the influence of Colonel de Grandmaison, Foch's prize pupil, who became the leader of the younger school, staged a *coup d'état* within the army, and unseated its reigning chief. Joffre was enthroned in his place, as a chief conveniently devoid of original ideas.

Then, using Joffre as a Delphic oracle, Grandmaison proclaimed the new doctrine and the ex-

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communication of all who dared to question it. 'The French army, returning to its traditions, no longer knows any other law than the offensive. . . . All attacks are to be pushed to the extreme . . . to charge the enemy with the bayonet in order to destroy him. . . . This result can only be obtained at the price of bloody sacrifice. Any other conception ought to be rejected as contrary to the very nature of war.'

What a contrast with the note of Napoleon himself during the brilliant campaign of 1805, which culminated at Austerlitz—'All my care will be to gain victory with the least possible shedding of blood.' How different, as an inspiration to commanders and men, from the words of the new oracle. And all the more strange because this oracle claimed, and believed itself to be the reincarnation of Napoleon, in direct apostolic succession.

After recasting the official doctrine in an imitation that was a travesty of Napoleon's, Grand-maison's next step was to make ready the human sacrifice. To this end he went back beyond Napoleon to the Prussian model of Frederick, and aimed at a discipline of the muscles, not of the mind, sacrificing initiative in order, by an incessant repetition, 'to develop in the soldier the reflexes of obedience'.

This crazy structure was crowned by a new war plan, blindly offensive, in which all the available forces were to hurl themselves on the enemy, sac-

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rificing the immense defensive advantages provided by their own fortified frontier, and its value as a means to a truly economic distribution of force.

The chain was complete, from Clausewitz to Grandmaison. But to it, unhappily, were now linked the fortunes of Britain. And this link was forged by Foch, through his friendship with Henry Wilson, who was, first, head of the British Staff College, and then, Director of Military Operations in the years immediately preceding the war.

There is no exaggeration in saying that this friendship diverted the course of English history—because it revolutionized the traditional war policy of the island Kingdom. For, owing to the ascendancy that Foch gained over Wilson's mind, and Wilson's unquestioning acceptance of Foch's views on war, the British army was made an appendage to the French war plan, and condemned to share in its futility, while the British Government was committed beyond its power to draw back. The detailed completeness of Wilson's inelastic arrangements were a rope round the neck of British policy.

Moreover, by making the British army the left wing of the French, the Foch-Wilson alliance ensured that Britain would have to break away from her traditional strategy, conscript the manhood of the nation into the army, and place the weight of that national army in France. The chain was drawn tighter by the dangerous collapse of the

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French war plan, itself caused by a theory of war that had lost touch with reality, and with the real lessons of the Napoleonic era. All that followed can be traced to this errant movement of military thought.

The weak point of 'the will to conquer' was shown in August 1914, when bullets—the hardest of facts—proved that they could overcome the will of the stoutest commander by their effect on the bodies of his men. It was proved again at ever-rising cost in countless abortive attacks, too many of them directed by Foch himself, until at last commanders took to heart the lesson that the will to conquer is powerless without a preparatory advantage, moral or material. That its point will only be blunted if its path is not prepared by surprise or by superior weapon-power.

The theory of mass suffered as rude a shock. Calculated to achieve success by a process of concentrating superior numbers at a so-called decisive spot, the formula was nullified by the mechanical progress which made one man sitting behind a machine-gun the superior of a hundred, sometimes a thousand, who were advancing upon him with a bayonet. The more ranks of attackers, the more swathes of dead—that was all. Such was the price paid for the folly of imitating Follard in the twentieth century, and trying to revive the theory of the phalanx. It was no use to concentrate a reserve five

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or ten lines deep at a point held by only one line of defenders, if your first line could not break through that one line. The problem could only be solved by recourse to art—by developing new weapons, by creating surprise, or by taking advantage of obscurity, whether darkness or fog.

If the armies were so long in trying that solution, and had not fully achieved it even when exhaustion brought the war to a ruinous end, the cause may be traced to the failure of military thought to concern itself with tactical mobility—the means of advancing on the battlefield in face of fire. And for this failure Clausewitz was primarily responsible.

As for Clausewitz's belief that 'superiority in numbers becomes every day more decisive', there was a strange irony in the fact that its fallacy was proved most emphatically of all by his own Germans against his old associates, the Russians. And it was by their superior mobility as much as by their superior weapons that the Germans were able to discount the vastly superior number of their Eastern enemy.

But perhaps a greater irony lay in the way that the Germans forfeited victory in the West by following Clausewitz's law of strategy, 'to keep the forces concentrated'. By looking at the Napoleonic system through his distorted lenses, they had failed to perceive the real purpose and value of Napoleon's wide-stretched net formation—as an auto-

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matic means of distraction. It is true that increased numbers, fostered by Clausewitz, had made it difficult to leave wide intervals between corps and armies. But even when an interval was possible, modern commanders have avoided leaving one—obedient to the law of Clausewitz. Instead of moving wide, they have instinctively closed in, fearful of the risks they might run if they did not march shoulder to shoulder—but reckless of the opportunities thus lost for menacing or outflanking their opponents. Their short-sightedness is the more remarkable because the risks to their own security have grown less as the range of weapons and the means of lateral communication have developed.

The folly of that narrow view was shown, above all, in the opening weeks of the war in the West. For it was the relative wideness of the Germans' original advance that caused the collapse of the French plan. And it was, again, because their right wing was found to be moving unexpectedly wide and fast that they ruined Joffre's second plan. But Moltke the second, having no clear understanding of the value of width, grew anxious at the intervals which arose between his marching armies. His fear led him to approve a change in his own plan, by which Kluck's army on the right wing wheeled inwards to skirt the east of Paris, instead of sweeping round the west. And, by thus seeking to contract both his line and his risk, Moltke exposed himself

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to a decisive counterstroke—and a fatal one. For the Marne was the grave of German prospects of victory in the war. Clausewitz's 'law' might appropriately be engraved on the tombstone.

But other consequences of Clausewitz's teachings manifested themselves almost as soon. In their blind pursuit of 'the one means'—the destruction in battle of the enemy's armed forces, the Germans spurned the chance not only of seizing ill-defended Paris but of occupying the unguarded Channel Ports—ripe apples that were ready to fall into their mouths. Their folly would shortly be capped by that of the Allies who, blinded by the same theoretical maxim, would stubbornly hurl themselves in hopeless assaults on the entrenched enemy in France, squandering far more men than would have sufficed in all to seize the Dardanelles, force Turkey to surrender, and open the back door to their munition-starved Russian ally.

By blind adherence to that same impractical ideal, the Allies would throw away one real point after another. They would encourage Bulgaria to join the enemy, allow Serbia to be overrun, forfeit the chance of probing Austria's weakness, and cause a great part of their own forces to be pinned down in the Near and Middle East throughout the whole war. During four years the Clausewitz-intoxicated generals would pursue an ideal without asking themselves whether the conditions made it practic-

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able. And, at the end, as crowning irony, the issue would be decided by an economic means, the blockade, rather than by any decisive victory in battle.

But the result casts a reflection on the Clausewitzian end, as well as on the Clausewitzian means. An even more grave reflection. The conception of 'absolute war', which formed the keystone of his doctrine, was the most extreme, and the most unreal, of all his contributions to thought. For if the term 'absolute war' has any meaning it is that of fighting until the capacity of one side for further resistance is exhausted. In practice, this may well mean that its conqueror is brought to the verge of exhaustion, too weak to reap the harvest of his victory. In other words, absolute war is a war where the conductor does not know where to stop. It implies that the end is pursued, regardless of what lies beyond. The conductor allows the fighting impulse to usurp control of his reason.

It is clear that in 1870, if the German generals were filled with the spirit of Clausewitz, Bismarck at least kept a cool head. His principle was to make war with profit, and to make peace when war ceased to promise profit. He showed himself ready to take a reduced dividend at any sign that the continuance of the war might produce a deficit. Events made this precaution needless. After several uneasy moments, the success of German arms became complete. So complete that in the peace settlement

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Bismarck was forced to yield, against his judgment, to the clamour of the generals, and to take a larger profit than he thought to be wise.

But the ill effect of Germany's too complete success went further, and wider. Because 1870 was taken to be the vindication of Clausewitz, his theory of absolute war became fixed on the mind of military Europe. Proclaimed by soldiers everywhere as an indisputable truth, it was submissively accepted by a generation of statesmen dangerously ignorant of war.

By its grip on European thought, and the bias it gave to such thought, the philosophy of Clausewitz helped to bring about the World War. His dictum that 'war is the continuation of policy' became a catch-phrase impulse to pursue a warlike policy. Again, in the critical days that preceded the decision for war, his theory acted as a check on impulses to maintain peace. Statesmen in the several countries, handicapped by their own ignorance of war, had to give way to 'military reasons' that had no foundation in reason. Thus, having been brought into war, they were held helpless in its grip by the 'absolute' conception. The formula of war to the utmost was ceaselessly recited by their military advisers, and at each repetition of the sacred name of Clausewitz the statesmen bowed their heads. So they continued, rigid in their determination, to the point of common exhaustion. Never, surely, has a theory had so fatal a fascination.

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Half a century ago John Richard Green, in his *History of the English People*, that historical best-seller, delivered himself of the statement—'War plays a small part in the real story of European nations, and in that of England its part is smaller than in any.' It was an astoundingly unhistorical statement. In the light of to-day it has an incapable irony.

We live in a time when 'war' is on everyone's lips; when everything contemporary is dated in relation to the last war; when those, who dislike the subject most, talk about it most—if their talk be only about the prevention of war.

That volume of talk is proof of their subconscious realization of the part that war has played in the story of their lives, and the life of modern Europe. Subconscious, because they give astoundingly little recognition, in a practical sense, to the importance of the subject. They talk much *about* war, but rarely do they talk *of* it—as a subject so serious as to be worth the serious study of every thinking man and woman. They appear to regard it as a disturbance of Nature similar to an earthquake, to be

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guarded against by structural precautions, rather than as a disease that might be prevented through investigation of its causes, and the danger of which might at least be curtailed by scientific treatment.

If war is not strictly either the one or the other, the analogy with a disease is far closer than that with an earthquake. And close enough to warrant a demand for scientific research into its nature, conduct, and effects.

For the failure to treat it as a branch of scientific knowledge, responsibility lies as much on men of learning as on men of war. By the nature of their profession, soldiers are practitioners, not detached researchers. And by the nature of their duties, they are general practitioners, so occupied in administering immediate remedies and compounding drugs, that they have not the freedom for research, if peradventure they have the bent for it. Even a Staff College training is more akin to walking the wards than to work in a laboratory.

The study of war as a branch of knowledge, requires the method of work that prevails in a University as well as the attitude of mind which is inculcated there. But it is not likely that these needs will be fulfilled until men of learning change their attitude of mind towards war, and learn to regard it as a branch of knowledge worthy of exploration.

Their present attitude is still dominated by that of John Richard Green. It reflects the spirit in

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which he wrote—‘It is the reproach of historians that they have too often turned history into a mere record of the butchery of men by their fellow men.’ In their eagerness to rid themselves of this reproach, modern historians have not only tended to lose sight of reality, but have lost the chance, to mankind’s loss, of elucidating the course and influence of war.

They have yielded to the pendulum of fashion, swinging from one extreme to the other, to the distortion of history. For while they have turned history into a record from which war is almost missing, they have left what remains as meaningless as their predecessors did, so that it still seems mere unintelligible butchery.

This modern *history minus war* has a close connection with the vogue for *evolutionary* history. Its tendency is to suggest that movements are independent of individuals, and of accident; that ‘the Captains and the Kings’ count for little; and that the tide of history has flowed on unperturbed by their broils.

Its absurdities are palpable. Can anyone believe that the history of the world would have been the same if the Persians had conquered Greece, if Philip of Macedon had had an unambitious or un-military successor, if Alexander had failed to conquer the Persians, if Hannibal had captured Rome, if Scipio’s cavalry had failed to return at Zama, if Cæsar had not crossed the Rubicon, if Mahomet had been beaten at Badr, if Gustavus Adolphus had

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survived at Lützen, if Napoleon had been killed at Toulon, if Sherman had not captured Atlanta? Can anyone believe that English history would have been unaffected if William of Normandy had failed at Hastings or Cromwell at Naseby?

The catalogue of history-changing 'accidents' is endless, and might be indefinitely enlarged. For besides the issues of war it includes the fateful effects of disease, assassination, pure accident, and escapes from them. It includes the unforeseeable results of individual decision in its endless combination with other individual wills. It even includes the character of the individual as well as the circumstances in which each decision takes form.

But among all the factors which produce sudden changes in the course of history, the issues of war have been the least accidental. Here is a fact, a vital fact, to which history has been unduly inattentive.

The fault in the past has lain with the dramatic tendency of chroniclers to exaggerate the element of luck, so popular in its appeal. Polybius exposed this tendency more than two thousand years ago, remarking that 'those who are incapable of taking an accurate view of opportunities, causes, and connections attribute to the gods and to fortune the credit for what is accomplished by sagacity and far-sighted calculation'.

The fault in recent times, since history began to be treated scientifically, has been the neglect of war by

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historians. With few exceptions, they have left the field to the mercy of military chroniclers zealous to glorify achievements rather than to discover the facts, and descriptive artists anxious for a colourful effect, most easily produced by vivid emphasis of the chances of battle.

Yet, in reality, despite its rarity, reason has had a greater influence than fortune on the issue of the wars that have most influenced history. Creative thought has often counted for more than courage ; for more even than gifted leadership. It is a romantic habit to ascribe to a flash of inspiration in battle, what more truly has been due to seeds long sown—to the previous development of some new military practice by the victors, or to avoidable decay in the military practice of the losers.

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The success of the Greeks over the Persians was not merely a matter of a battle—the battle of Marathon was but an incident in that tremendous struggle. The repeated Greek successes are adequately explained by their development of a tactical formation, the phalanx, supplemented by superior armour and the ten-foot Doric spear.

Within the bounds of Greece itself, the weak spot of the phalanx was probed by Epaminondas who, operating on the drill-drugged Spartans, cleverly

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took advantage of the hoplites' natural tendency to edge to their right, or unshielded, side. For he thinned his own right wing, and held it back out of danger, while with his reinforced and cavalry-covered left wing he was able to crush his opponent's right.

This power of concentrating strength against weakness was developed to a higher pitch in Alexander's army, which, with its phalangial pivot, light infantry joint, and cavalry striking arm, was a superbly dovetailed fighting machine. To this tactical mechanism, so flexible and incisive, Alexander certainly owed his triumphs far more than to his tactical art.

The phalanx was finally overthrown by a mechanism more flexible than itself. Preserved as a tradition, its inadaptability was fatally exposed when it met the legion at Cynoscephalæ. Polybius, who was an essentially scientific historian of war, puts the issue in a nutshell: 'The nature of the phalanx is such that the men cannot face about singly and defend themselves.' One of the Roman tribunes 'with about twenty maniples . . . managed to get behind the Macedonians and charge them in the rear'. His perception spelt the destruction of the phalanx.

The phalanx was a formation which required ideal conditions. The legion fitted a variety of conditions, and therefore was not dependent on an ideal general. Armed now with the twenty-foot

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sarissa, the close-packed men of the phalanx had an outward advantage over the more dispersed Roman foot, each of whom, as Polybius points out, had to 'face two of the front rank of a phalanx, so that he has to encounter and fight against ten spears'. 'Why is it then that the Romans conquer? And what is it that brings disaster on those who employ the phalanx? Why, just because war is full of uncertainties as to time and place, whereas there is but one time and one kind of ground in which a phalanx can fully work'—flat and open ground.

'If the enemy decline to come down into it, but traverse the country sacking the towns and territories of the allies, what use will the phalanx be? For if it remains on the ground suited to itself, it will not only fail to benefit its friends, but will be incapable even of preserving itself; for the transport of supplies will be easily stopped by the enemy, seeing that they are in undisputed possession of the country: while if it quits its proper ground, from the wish to strike a blow, it will be an easy prey to the enemy. Nay, if a general does descend into the plain, and yet does not risk his whole army upon one chance, but manœuvres for a time to avoid coming to close quarters, it is easy to learn what will be the result from what the Romans are now doing.'

'Some of their divisions are kept in reserve, while others join battle with the enemy at close quarters. Now, whether the phalanx in its charge drives its

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opponents from their ground, or is itself driven back, in either case its peculiar order is dislocated; . . . and when this occurs the enemy's reserves can . . . fall upon it in flank and rear. If, then, it is easy to take precautions against the opportunities and peculiar advantages of the phalanx, but impossible to do so in regard to its disadvantages, must it not follow that in practice the difference between these two systems is enormous?' 'The Macedonian phalanx is difficult, and sometimes impossible to handle, because the men cannot act either in squads or separately. The Roman order, on the other hand, is flexible. . . . Therefore as the individual members of the Roman force are so much more serviceable, their plans are also much more often attended by success than others.' 'I thought it necessary to discuss this subject at some length, because at the actual time of the occurrence many Greeks supposed, when the Macedonians were beaten, it was incredible; and many will afterwards be at a loss to account for the inferiority of the phalanx to the Roman system.'

Polybius's analysis would serve admirably as an exposition of the handicaps that a present-day infantry division, dependent for its security on a close-knit disposition of its artillery and anti-tank guns, suffers when confronted with a mobile mechanized force, which enjoys superior flexibility—because each tank is a self-contained fighting unit, able 'to

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fight in the main body, or in a detachment, or in a single manipule, or even by himself'. One condition is reversed—the 'proper ground' for the phalanx was in flat country, whereas that for the present-day division is in rough country. But it is as true of the latter as of the former that if it 'remains on the ground suited to itself'—in what are now called 'tank-proof localities'—it 'will not only fail to benefit its friends, but will be incapable even of preserving itself; for the transport of supplies will be easily stopped by the enemy; . . . while if it quits its proper ground, from the wish to strike a blow, it will be an easy prey to the enemy'.

Besides bringing out the predominant value of flexibility and combatant individuality, and hence throwing a prophetic light on the inherent flaw in the modern divisional 'phalanx', Polybius's analysis significantly reveals that *dislocation* was the real act of decision. It is a testimony for our instruction as well as a tribute to his insight. The phalanx could only be defeated when its order had been dislocated. The condition is equally true of any modern force, although the effect may be achieved by upsetting the mind of its commander, or by interrupting its communications, as well as by dislocating its dispositions. The Marne was but a greater Cynoscephalæ.

But the historic significance of this classical analysis, and the purpose for which I have quoted it at

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length, is that it establishes so clearly the decisive part that a new military technique, and the inadaptability of an old technique, can play and has played in changing the course of history.

The legion which overcame the phalanx was itself the recent product of a military reform which had been still more fateful in its effect on history. In its early form the legion had a potential flexibility through its distribution in three lines and its lateral division in separate maniples. But that promise waited for hard experience and a Scipio to redeem it.

At the outset of the Second Punic War the legion had proved incapable of coping with the real power of manoeuvre which Hannibal's army possessed in its elastically hinged cavalry wings, capable of exploiting the disorganization which the commander's art created among the enemy. Polybius spoke of Cannae as 'a lesson to posterity that in actual war it is better to have half the number of infantry and the superiority in cavalry, than to engage your enemy with an equality in both'. Here, again, his words aptly fit the problem of modern armies, anxious to provide themselves with tanks—the new mechanized form of cavalry—but held back by their reluctance to cut down their infantry to obtain the money. The shadow of Cannae looms over their hesitations.

The ultimate victory of the Romans at Zama was by no means inevitable. It was achieved by a man,

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Scipio, who was not only a military artist but a military constructor. It was due to his insight in realizing the fundamental flaws in the legionary tactics and to his success in remedying them. He set out patiently to create an equally effective cavalry arm and to develop a superior infantry pivot. In Scipio's new model legion, the maniples had acquired a complete flexibility and the rear lines were used as a reserve for decisive manoeuvre, not merely as a frontal reinforcement to fill the gaps.

There is hardly less significance for posterity in the way that Scipio based his strategy on surprise and mobility, and developed a practice essentially different from the theory that was to be born of Clausewitz two thousand years later. For, first by his surprise capture of the Carthaginian base in Spain; then—to the horror of more conventional Roman strategists—by invading Africa while Hannibal was still in Italy; finally, by his systematic attack on the economic resources and allies of Carthage, Scipio showed that his principle was to avoid pitting himself against the 'main armed forces' of the enemy until he had prepared their collapse indirectly by cutting their roots. No one, too, has more fully proved that battle is not 'the only means'. Moreover, in the most 'absolute' type of war that history has known, he introduced a principle of 'moderation' which was of invaluable service to him in detaching the allies of Carthage without cost, and

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in weakening the moral front of the Carthaginians themselves.

Scipio's contribution to the theory of war endures long after the long-lived state affected by his tactical reforms has passed away, and still has a vital meaning in an age when the tactics of the legion have merely an antiquarian interest. But we should not forget that the success of his strategy depended, as all strategy does, upon its being tactically possible. And it was due to his tactical developments, above all, that the legion, even in the hands of less able successors, continued that career of success which created and maintained the Roman Empire.

The ultimate decline of the legions can be traced to the fact that the Romans, like so many armies before and since, forgot the lessons which they had culled from defeat to produce victory. The cavalry arm as a decisive agent hardly survived Scipio himself. The legion in its new form would still win many triumphs, although its limitations were ominously exposed by the mounted archers of the Parthians, against whose pin-prick tactics the legion was handicapped by its lesser mobility when the Parthians had time and space for their manoeuvres.

The long reign of the legions owed much to their adaptation of a civil utility to military purposes. The development of a wonderful system of roads gave the legions an exceptional strategic mobility, within the frontiers of the Roman Empire. But as

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time wore on the legion lost its tactical mobility and began to grow stiff in the joints—partly through garrison service and partly through the arthritis of tradition. When the knell of the legions was sounded at Adrianople in A.D. 378, it was really due to their incapacity to change front rapidly to meet a new direction of attack. The legion's lost power of flexibility ruined it more surely than did the shock-power of the mounted Goths.

From the ashes of the Empire emerged the new-old Byzantine Empire. When Justinian mounted the throne of Constantinople, the barbarian tide had almost engulfed the Mediterranean world, and the legacy of Rome seemed likely to be divided between Vandals, Goths and Persians. Beyond its infinite political consequences, this turn of events would probably have meant the permanent establishment of the Arian creed throughout the West. These probabilities were upset by the military renaissance that took place under Justinian's generals, Belisarius and Narses. The Vandals were overthrown in Africa, and the Ostrogoths in Italy, both countries being brought again under the Roman sway, while the Persian menace to Syria was repelled.

When we consider the slenderness of Belisarius's resources, these achievements have an air of the miraculous. While he certainly owed much to following his maxim that 'success is always mainly pro-

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moted by surprise', the available evidence about his campaigns does not satisfy one that his art was the sole factor in his astonishing run of success against vastly superior force. His generalship was dependent on a highly flexible and mobile instrument, and it is clear from the *Strategicon*, that military textbook of the Emperor Maurice's reign, that the Byzantine army was such an instrument in the generations that followed Belisarius.

War was studied more scientifically than in any army until that of France in the late eighteenth century. This activity of military thought bore fruit in a remarkable economy of force and strategic mobility, applied through a flexible divisional system which anticipated by a thousand years the reforms of 1788. Behind the frontier garrisons the mobile divisions assembled ready for swift convergence against an invader. The supply system and technical services were more highly organized than those of any army until recent times.

The tactical handling of this instrument was based mainly on the strong cavalry arm, composed of horse-archers and heavy armoured cavalry, the former being used to screen and pave the way for the launching of the latter, in a way that offers a vivid parallel with the latest tactics of the mixed tank battalion, of light and heavy tanks.

In this military instrument, and in it almost alone, seems to lie the explanation of the long survival of

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the Byzantine Empire, which maintained its power although ceaselessly beset by foes, for five hundred years and did not finally fall until a thousand had passed. That record has received scant recognition from English historians, unduly absorbed with the legacy of the Western Empire, so much earlier deceased. And the delusion, spread by Gibbon, that the Byzantine victories 'were accidental', obtained a long start before it was corrected by modern historians like Finlay, Bury and Oman.

By contrast, the Norman conquest of England, and its far-reaching effects, have certainly not suffered from any neglect. Yet even here the part played in this conquest by William of Normandy's superior military technique has hardly received adequate emphasis. Likewise in the centuries that followed, the ceaseless baronial struggles, obscure in their details, have tended to hide such a significant example of the Norman gift for warfare as the conquest of the greater part of Ireland, as well as the repulse of a strong Norse invasion, by Earl 'Strongbow' and a few hundred knights from the Welsh Marches. It was an achievement remarkable not only for the slenderness of the means and the extreme difficulty of the forest and bog country, but for the adaptability with which the conquerors recast and reversed the conventional feudal methods of warfare.

Adaptability, again, was the keynote of the tech-

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nique which Edward I evolved in his conquest of Wales. A still more notable example followed the deserved defeat of his successor at Bannockburn. For while the Scots clung to their traditional method, so similar to that of the Greek phalanx, two 'disinherited' Normans, Edward de Baliol and Henry de Beaumont, compounded the answer to it in an unauthorized expedition to regain their Scottish fiefs. Choosing their own ground and absorbing the first shock of the charge with dismounted men-at-arms, they used their English archers to gall the flanks of the 'phalanx' until it became disordered, and then threw in their small mounted reserve to complete the issue. This experiment at Dupplin in 1332, repeated a year later at Halidon Hill by Edward III to the greater discomfiture of the Scots, became the key to victory in the Hundred Years War against France. It was the tactical method of Crécy, Poitiers and Agincourt.

Military inadaptability was, as surely, the ruin of French chivalry. To this conventional rule there was one outstanding exception, the Constable du Guesclin, who, in the second phase of that war, adopted a strategy of continual harassing surprises, while avoiding battle. Thereby, within five years, he reduced the vast English possessions in France to a slender strip of territory near Bordeaux.

Recovered by Henry V, their final loss under his successor was a further lesson in the importance of

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adaptability. For the expulsion of the English was due more to the advent of artillery than to that of Joan of Arc. Not only did their chain of castles fall like ninepins before the French artillery train, but the latter provided the decisive answer to the long-lived English tactical method. At Formigny in 1450, instead of launching an assault on the unshaken English archers, covered as usual by trench and palisade of stakes, the French brought up two light guns to enfilade them. These goaded the English into an assault, which exposed them to a decisive counter-stroke in the open. Formigny foreshadowed the end. One more step in military evolution coincided with one more landmark in history.

Seventy-five years later, at Marignano in 1515, the Swiss paid the penalty for military conservatism, and saw their triumphal record shattered by the French, whose light artillery broke the famous Swiss hedge of pikes and so opened the way for the French cavalry to make that decisive charge which, in earlier times, they had so signally failed to achieve against the English foot.

Yet, before the next decade had ended, the French in turn were the victims of a new development, and suffered from a new weapon a reverse strangely similar in form to those of Crécy and Poitiers. For at Pavia in 1525 the French cavalry, following up their initial success, were thrown into disorder on meeting a dispersed line of fifteen hundred 'skilful, practised

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and artful' Spanish arquebusiers, who had been trained to such a degree of flexibility that they could wheel and face in any direction 'without word of command'. 'Thus they baffled the fury of the horse in such a manner, through this novel system of fighting, that these arquebusiers, unembarrassed and most wonderfully, though cruelly and villainously, discounted with much ease the power of the French cavalry, who were utterly ruined.' The sequel to the tactical surprise which they brought about, 'contrary to all rules of war', was the destruction of the French army and the capture of the French King, whose imprisonment at Madrid so flattered the pride of the Spanish people that it reconciled them to their own Sovereign's policy of external aggression.

Pavia ushered in the reign of individual firearms, and spelt the doom of shock arms. It also ushered in the great era of Spanish power in Europe. This was founded on the fame that Spanish arms acquired, far more than on the achievements of Cortés and Pizarro in America which have received so much greater attention from history. And the fame of the Spanish *tercios* was founded on a school of thought, inspired by Gonzalo de Córdoba. This created a new and distinctive system of tactics, in which the agility and mobility that the Spanish soldier had developed in guerilla warfare was reinforced with firearms and highly drilled pikemen. These formed

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a central body, with wings of 'shot' to operate against the enemy's flanks.

For a century the Spanish system was the admiration, and inspired the imitation, of Europe. But, following the rule of military history, it eventually became the victim of its own victorious traditions. Rigidity ousted mobility in its tactical formations, which suffered not only from arthritis but from elephantiasis. 'Arquebusiers and pikemen were welded into a single body, with the arquebusiers and later the musketeers at the corners—like the turrets of what was virtually a slow-motion fortress.

The next great military change coincided with the uprising of a new power in Europe. Introduced by Gustavus Adolphus of Sweden, it is the key to his astonishing career of success, which liberated Germany from the grip of the Imperial Armies after they had already overrun it; all-conqueringly brought him from the shores of the Baltic to the foot of the Alps; struck proud Vienna 'dumb with fright', and was within reach of creating a vast Protestant confederation under Swedish hegemony, when he himself was struck down at Lützen. Rarely has so great a mark been made on history in so short a time. And it is, unmistakably, the imprint of a new military technique.

For his victories were due to the instrument which he had created and inspired rather than to any superlative art of his in strategy or tactics. It is as a

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great military reformer that he stands out in history, and his just claim to be considered the 'founder of modern warfare' rests on his achievement in adapting the methods of war to the new conditions brought about by fire. He introduced the wheel-lock and the cartridge, lightened and shortened the musket so as to dispense with the fork or rest, and reduced the number of loading motions—all aids to mobility and fire power. Further, he cut down the proportion of pikemen and increased the musketeers to two-thirds of the army, and formed them for firing in a three-deep line, which remained the custom for another two centuries—in the British drill book until 1824. Besides making this drastic reduction in the depth of his formation, he broke it up into small fragments, each of them flexible like the Roman maniples. And the Swedish 'legion' soon proved its superiority to the Spanish 'phalanx'.

His administrative reforms were hardly less significant than his tactical. His was a regular army, regularly paid, endowed with a proper supply system, a medical service, and a military code that served as a model for subsequent military law. With troops so well organized and cared for, the maintenance of regular discipline was made possible, and was aided by the strong religious feeling which permeated the Swedish army, so that its good behaviour under Gustavus shone like a beacon amid the blackness of the Thirty Years War.

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Gustavus also initiated a revival of cavalry, which had lost its essential momentum. The increased obstacles which it now met were accentuated by the massiveness of its own formations, and it had slipped into the practice of trotting up to the enemy's piked array, when each rank would fire their pistols in turn and then wheel off to reload. Feeble as was the method, it was the consequence of the defensive strength which infantry had acquired. Gustavus revived the cavalry charge, but he also took care to make it possible. He reduced the ranks to three, and made them charge at the gallop, after the first rank only had fired their pistols. At the same time he used his musketeers and his new mobile field artillery, with their light cast-iron four-pounders, to prepare the way for the charge. Thus, like Scipio, he made his mounted arm a real striking arm, operating decisively on the flanks of his offensive infantry pivot.

It was this re-mobilization of cavalry, together with the administrative reforms, which most influenced warfare, and history, in the generations that followed. English history within a generation was to experience its greatest cataclysm, and the triumph of the Commonwealth over the royal power was achieved by a military instrument, the famous 'New Model' army. This has ever since been remembered as the supreme example of how organization and training infused with a flaming spirit,

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here supplied by a religious fervour, can change the scales of fortune. The 'New Model' rivalled the Swedish army in mixing prayer and powder into an explosive compound that would shatter all resistance. It differed from the Swedish army in that its operations were based predominantly on its cavalry. Cromwell, indeed, relied almost as exclusively on his mounted arm as had Belisarius.

This condition can be traced to English conservatism. At the time the Civil War opened, English military opinion and practice lagged behind the rest of Europe in perceiving and applying the lessons that Gustavus had provided. Before the end of the previous century some far-sighted English military writers, such as Sutcliffe, had urged that we must increase our proportion of musketeers if we were to hold our own with the French. And the Thirty Years War had amply confirmed their view. Indeed, a 'universal contempt of the pike' arose among the soldiers who took part. But in England conservatism was rooted in the 'gentlemanly' prejudice that still in the twentieth century upholds the horse against the machine.

To quote Firth—"The pike was held more honourable because it was the more ancient weapon. It was also held more honourable because all adventurous gentlemen who enlisted to see the Wars preferred, as the phrase was, "to trail a pike". Therefore the pikeman was regarded as a gentleman

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compared with the musketeer.'

But pikemen were relatively immobile, and the use of pikemen was a brake on mobile operations. As for the English musketeers, they were still equipped with the matchlock, which seriously discounted their value. For at the best it was a slow-motion weapon, loading and firing being a tedious process, while misfires were often as high as 'three or four of ten', and in bad weather the majority might be unusable in emergency, owing to the match being damped or the priming blown out of the pan.

Thus the predominant role was filled by the cavalry, whose mobility gave them far wider opportunity, while in seizing this, their security was assisted by the defects of the infantry. This general service superiority may be understood still better if we realize that the dragoons were simply mounted musketeers, with the advantage over their fellows on foot not only of mobility, but of being armed with a flintlock—the 'dragon', from which they derived their name. They also had swords, whereas the musketeer had to depend on the pikemen if his musket failed.

At the outset of the war, the Royalist cavalry had the advantage over the Parliamentary not only in numbers but because Prince Rupert had adopted Swedish formations and tactics. While Rupert, however, was content to adopt, Cromwell, coming to

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the technique of war with a fresh mind, proved his power to adapt and develop. With the 'New Model' he gave more and more impetus to the cavalry attack, increasing the speed of the charge, and assisting its momentum by training the troopers to reserve their fire until 'within a horse's length of the enemy'. Another important factor in their success was the selection of men and horses, both outweighing their opponents more and more as the war progressed.

On the Continent, too, Condé's defeat of the Spanish at Rocroi was a cavalry victory. Ending the long reign of Spanish arms, it paved the way for the accession of French military power, which, completed by the great work of army reorganization that Louvois carried out, made the France of Louis XIV the first and most-feared nation in Europe. Not until the eighteenth century had come was that dominating power curtailed, and then only at the price of exhaustion to all the neighbour states, save England, that dared to resist it.

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Thus we are brought to the point where our main study began. The brief survey of some of the more important places where new military ideas changed the course of history in the previous two thousand years may provide a background for the last two hundred. Thereby it may serve to emphasize the meaning and the lesson of those two successive yet

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contrary currents of military thought that have had so tremendous and far-reaching an influence in shaping the world we live in to-day.

The lesson might be epitomized in the word 'adaptability'. For this has been the condition of survival from pre-history to present times.

In the political field it is a warning of the danger of pursuing particularist aims in a time when the world is so closely interconnected that none can despoil his neighbour without damaging himself, and when science is creating weapons of such potency that it is as difficult to use them with immunity as to drop a Mills bomb in a drawing-room without becoming one of its victims.

But it is also a warning of the dangers of trying to prevent war without an understanding of its nature or of human nature, of prohibiting war without promoting justice, of devising schemes of disarmament without a grasp of the conduct of war.

In the military field, with which this book is concerned, as a small contribution to the understanding of war and its effects, the lesson of the last two centuries reinforces the experience of all the past centuries—as to the decisive importance of adaptability. Yet it has been a lesson taught mainly by negative examples, or at best by delayed proofs. And the catalogue of failure is a balance sheet of loss—showing an immeasurable enlargement of the evils of war, its scope and its cost.

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For the law of adaptability implies, in war policy, an adjustment to post-war aims which fundamentally modifies the theory of 'absolute war'.

In strategy, it implies an adaptation of end to means, of aim to reality, which modifies the ideal theory of destroying the 'main armed forces' of the enemy, and the main enemy. That law of adaptation, too, should govern the pursuit of a would-be decisive battle.

War has not the simplicity that single minded strategists have too readily assumed. The strategist must acquire a deeper understanding of the principle of concentration, in its more profound sense of *concentration against weakness produced by distraction*. He must also acquire a new understanding of *the principle of alternatives*—i.e., adaptability of objectives—a principle which has never yet found a place in the textbooks though inherent in the very nature of War.

For war is a two-party affair. In solving any of its problems you have to deal not only with the passive resistance of natural conditions, but with the active interference of an opponent—who preserves his freedom of action save in so far as you contrive to paralyse it. Hence, to be practical, any theory must take account of the opponent's power to upset your plan.

The sands of history are littered with the wrecks of plans that ignored this fundamental condition. And

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those wrecked plans, if often due to ignorant pilots, have been due as often to the faulty compass provided by an ill-balanced theory of war. It is not enough to ensure that men of ability are selected as generals. The theory on which they practise their art, the theory taught in the schools of war, must be true to the current reality of war.

In going through the private diary, still unpublished, of one of our highest leaders in the war, I was struck by the fact that whenever he appeared to have resolved questions by the light of his own common sense he had usually been justified by events, while the times when his thought had, obviously, been ruled by precepts learnt in his Staff College studies were the occasions of his most unfortunate decisions.

To form a true theory we must create the conditions necessary for its evolution. War must be studied scientifically, with the mind completely detached from all predilections save that for truth. The attitude of mind which shrinks from distasteful facts from love of country, respect for authority, or pride of service, is out of place in scientific research. Such an attitude endangers the very cause it seeks to serve. Thus, in a military context, one can echo Nurse Cavell's immortal phrase—'Patriotism is not enough'.

Philosophers and scientists have shown that adaptation is the secret of existence. History, however, is

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a catalogue of failures to change in time with the need. And armies, which because of their role should be the most adaptable of institutions, have been the most rigid—to the cost of the causes they upheld. Almost every great soldier of the past has borne witness to this truth, and none more vehemently than the military heroes of the British Army. But it needs no such personal testimony, for the facts of history, unhappily, prove it in overwhelming array. No one can in honesty ignore them if he has once examined them. And to refrain from emphasizing them would be a crime against the country. For it amounts to complicity after the event, which is even more culpable when the life of a people, not merely of one person, is concerned. In the latter case there may be some excuse for discreet silence, since no testimony can restore the dead person to life. But in the former case there is no such excuse—since the life of the people will again be at stake in the future. In exploring the records of the last war, I have frequently come on suggestions to the effect—‘We might gloss over this’ or ‘It’s no good raking up what is past and done with’. That sort of attitude is responsible for the troubles that overtake each successive generation. And, in particular, for the troubles that have overtaken our own Army in the last four generations.

It is time that we faced the facts of our own history with the courage that has saved us on so many

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battlefields—often from the consequences of our blunders. For the idea that an army which, in its last four wars against white opponents, has such a record of obtuseness as the Crimean War, the first and second Boer Wars, and the World War reveal (even in the discreet official histories), is now immune from intellectual cataract, must seem incredible to anyone with the least historical sense.

Unless we are honest about our past, and alertly critical about our present, the odds are heavily against any improvement in our future—when the next test comes. It is only common sense to say that we cannot hope to build up a true doctrine of war except from true lessons, and the lessons cannot be true unless based on true facts, and the facts cannot be true unless we probe for them in a purely scientific spirit—an utterly detached determination to get at the truth no matter how it hurts our pride. Not a few military historians have admitted that they feel compelled by position, interest or friendship, to put down less than they know to be true. Once a man surrenders to this tendency the truth begins to slip away like water down a waste-pipe—until those who want to learn how to conduct war in the future are unknowingly bathing their minds in a shallow bath.

The failure to adapt theory to reality has been matched by the failure to adapt armament to technical progress—to adopt new weapons that inven-

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tion made available at the time when they promised a decisive advantage. As Fuller has pointed out, 'in 1805 the Rev. Alexander John Forsyth devised the percussion system, and offered it to the Army, but with no results'. It might have been invaluable in the Peninsular War. It was only adopted in time for the Crimean War. In 1824 Captain Norton invented the cylindro-conoidal bullet which 'caused the rifle to become the most deadly-weapon of the century'. We failed to adopt it until 1851.

Even when the Army had been provided with the Minié rifle its value was forfeited in the Crimean War because we continued to rely on the bayonet and on shock tactics—like our foes and our allies. In 1874 Wolseley recorded that 'the fighting tactics of Frederick the Great, improved by the Duke of Wellington to suit the arms of his day, are still alone to be found in our Field Exercise Book'. Even in 1932 our drill, instead of serving as a foundation for tactical movement and deployments, is still a survival of Wellington's period, when it was directly related to the tactics of the time.

The germ of the tank was seen during the Crimean War when 'Boydell steam engines fitted with footed wheels were sent out to negotiate the Bala-klava mud'. But it was only a civilian, James Cowen, who saw the tactical possibilities of such a machine. Half a century later another and more famous civilian, H. G. Wells, had a similar tactical

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vision. Years were still to pass before it was translated into fact.

Other armies were at least as blind. The breech-loading magazine rifle showed its tremendous advantage in the American Civil War, but equipment was so gradual that it never had a chance to prove decisive, as it might well have done. The bullet ruled the battlefields of that war, and the soldiers often discarded their bayonets, but the armies of Europe continued to rely on the bayonet, and to waste much valued training time in bayonet-fighting drill. During the American Civil War, indeed, most of the conditions and inventions of the World War half a century later, were vividly foreshadowed. But none of the professional armies of Europe attempted to profit by them.

In 1866 the Austrians, armed with a muzzle-loader, owed their defeats and their disproportionate losses mainly to the fact that the Prussian infantry were armed with a breech-loader, whose adoption the Prussian generals had strenuously opposed. The Austrians, on the other hand, were provided with new rifled cannon which might have redressed their disadvantages, but their correct use was not grasped by the Austrian General Staff. In 1870, similarly, the French forfeited the advantage inherent in their new mitrailleuse, a machine-gun, by using it as a field-gun. On these fire-swept battlefields cavalry were still hopefully taught to charge

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with the sabre, yet only one charge was successful, and that very expensive.

Even after their costly failures in 1877, the Russian generals found consolation in reciting Suvarov's absurd remark: 'The bullet is a fool, the bayonet alone is intelligent.' And the chiefs of other armies were not immune from the delusion. For in the years that followed, with firearms growing ever more deadly, the French and German armies returned increasingly to thick lines and to reliance on weight of human bodies in a massed assault.

The British army profited a little from a lesson it had from the Boers. It began that war on Crimean lines and shock methods, and was naturally handicapped in applying saner methods. As Sir Ian Hamilton noted, 'In situation after situation where our soldiers were helpless, the Boers were perfectly at home. It was this which made one Boer equal to three freshly landed British soldiers in everything except those hammer-and-tongs fights which . . . are quite exceptional.'

If we learnt the value of musketry from the Boer War, we grasped so little the wider significance of fire-power that in 1914 we had only two machine-guns per battalion, and gave little interest to these. But even after months of war, when the machine-gun had become mistress of the battlefield, General Headquarters resisted an increase, and Haig declared that the scale was 'more than sufficient' and

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the weapon 'much overrated'; and Kitchener laid down that at any rate four should be a maximum. It was left to Mr. Lloyd George to intervene and multiply the scale sixteen times!

The foreign armies had learnt nothing from the Boer War. The Germans, but not the French, learnt a little from the Russo-Japanese War that followed. Tactics were remote from reality. Thus, when the greater war came in 1914 armies were soon reduced to staring at each other across a no-man's-land that neither could cross. Only when munitions had piled up were they able to batter their way forward, with exorbitant loss and limited effect. This remedy proved worse than the disease, and the paralysis was only lifted when a new weapon, the tank, had at last overcome a barricade of military bureaucracy that offered a more obstinate resistance than the enemy's defences. The tale of the tank—which could have been available before the war, for plans of such a machine had been contemptuously pigeon-holed—is but a segment of the mosaic of marble-mindedness. Its glassy opaqueness is as depressing to contemplate as the deadly uniformity of its pattern.

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What is the message of this mosaic of history? What is the true moral that we should draw from it? The increasing influence of science on war, and the

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consequent acceleration of change, together with the fact that the military sphere has become more inseparable from the wider national issues in war and peace, clearly indicate the need for intellectual ability in the higher posts of the Army equal to that of the leaders in other spheres. To ensure this is certainly not easy, for no one can pretend that in modern times the military profession offers equal attractions and prospects to talent as others. To remedy this condition would involve a drastic alteration in the prevailing system of promotion, in which seniority predominates. Nevertheless, there is a makeweight in mankind's variability of tastes. The man with an inborn taste for soldiering, and a natural interest in strategy and tactics—the contest of minds at its most intense pitch—will not easily be deterred from following his bent. Those who cannot understand its fascination may find some elucidation in Marcel Proust's '*The Guermantes Way*'. Proust is only one of a number of great writers who have felt its appeal—indeed, it as often grips the layman as the professional soldier. One is reminded of Newman's remark when asked what he thought of the volume of Wellington's despatches which he had been reading. 'Think?' he said. 'Why, it makes one *burn* to have been a soldier!'

In this appeal lies the explanation why a military career, despite all its peace-time drawbacks, attracts a sprinkling at least of men who compare not un-

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favourably with those drawn to other careers. Unfortunately it is easier to attract them than to keep them. The slowness of advancement and the tedium of routine soldiering are naturally felt more by the enthusiastic and the able, than by the mediocre. Hence the reason why so many of the 'alpha' class drop out while still young. But the dullness of military prospects is by no means the only reason.

Here we come to a fresh issue. It is easier to attract men of intelligence than to keep their intelligence sharpened. In peace-time soldiering there is apt to be too little to keep interest alive and too much to distract it. During their passage through the junior ranks, officers are too continuously engaged in the ordinary course of duty to have much leisure for study and reflection, especially in view of the time conventionally devoted to sport and games. Sometimes that duty is interesting, sometimes tedious, but in any case little of it is related to the scientific study of war. And so much of a soldier's service is apt to be spent in provincial or colonial garrisons that offer neither a convenient place nor a stimulating atmosphere for such pursuit of knowledge. Perhaps the best remedy might be to establish periods of 'detachment' from duty for promising officers—some military variant of the idea underlying the University Fellowship.

When the officers reach the higher posts, they have in most of them, outside the War Office, more

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freedom from detail. But in actuality their time becomes so occupied with the ceremonial and social duties of their position that the opportunity to study war is more than ever restricted, even where the inclination survives. This, of course, is the fate of anyone who rises to prominence in any career, and it is rare for such a man to have the resolution to ration his engagements for the purpose of continuing his studies. But nowhere is there more difficulty, if nowhere more necessity, than in the Army.

It is the more necessary because, unlike most other professions, the military offers but rare opportunities for actual practice. Most of its operating experience is necessarily in the realm of make-believe. It is as if a surgeon was confined for his practice to the dissection of frogs and dead paupers. The rest of a soldier's training for command lies in the realm of theory. If this inevitably has disadvantages as a basis of preparation for the hard realities of war, its dangers need not be as great as they have actually proved in the past century.

For there is an alternative to pure theory—in history. And history is an essential supplement even to the most ample practice. Any man's personal experience, however long and however highly placed, can cover no more than a fragment of any one war. It suffers still worse limitations in comparison with the general experience of warfare in its different conditions and times, so that personal experience of

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one type of war may be more misleading than helpful in preparing for another.

But in history we have bottled experience, from all the best growths, only waiting to be uncorked. Unfortunately the professional soldier, with rare exceptions, is an amateur in this knowledge of his craft. His study of military history is neither sufficiently extensive nor intensive. Customarily it follows the method of concentrating on a few campaigns without a background, without acquiring a broad knowledge of all warfare. Moreover, the study of these few campaigns goes no further than an absorption of the facts and deductions set forth in some of the published accounts of and commentaries upon those campaigns. This reliance on someone else's research into the facts would be a less precarious approach to knowledge if the books used were themselves the product of true research. But too many, compiled from secondary sources in an uncritical spirit, offer a worse than second-hand acquaintance with the facts. And selection of the books for study is often made with so little discrimination that the student unknowingly is led to feed upon fiction rather than upon historical fact. At the best, as we have seen, the study of military history in an army, even in Staff Colleges, corresponds to the level of undergraduate work in other branches of history. The repeated errors of the military profession in the past can be traced to this superficial

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treatment of the only alternative to pure theorizing on make-believe and on fragmentary personal experience.

But not to it alone. For underlying it there is a psychological attitude that is a fundamental obstacle to truth. The soldier has not been *trained* to approach his problem in a scientific spirit of inquiry. His early education is directed, above all, to the cultivation of loyalties—multiple loyalties—to King, country, service, arm, regiment, and superiors. To strengthen him for his fighting function, and for the tremendous trials of fortitude which this entails, the development of an intense spirit of loyalty has great value. But, obviously and inevitably, it becomes an obstacle when the man so brought up turns to investigate the facts of warfare. His compound loyalties create prejudices which inevitably colour his vision and bias his judgment. Truth may not be absolute, but it is certain that we are likely to come nearest it if we search for it in a scientific spirit, and analyse the facts with a complete detachment from all loyalties save that to truth itself. The other loyalties may be essential to the soldier in action, but they are a danger in reflection. The attitude of uncritical loyalty may be essential towards the winning of a war, but it is a fatally blind attitude in which to prepare for war.

To understand this fundamental difficulty of the military mind may help many who feel bitter at its

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past follies, to become more charitable in judging them. But charity does not imply contentment with the results. It may be that only a philosopher could achieve a harmonious reconciliation of these opposing loyalties, but something can be done to help the normal soldier in adapting himself to the conflicting roles of loyal executant in war and truth-loyal student of war.

The first need is a change of attitude towards criticism and independence of thought. It is true that soldiers in authority have moved far from the attitude of last century, when it was the habit to tell juniors that they had 'no business to think'. In recent times they have frequently dwelt on the importance of encouraging thought. But in practice they fail to reconcile the need for thought with the desire for uniformity which, contradictorily, they sometimes preach with the same breath. And they are still apt to show disfavour towards any soldier who, acting on their advice, indulges in criticism of doctrine that offends their sense of discipline.

Yet psychology and history alike teach us that men of personality and creative originality—in other words, the men naturally fitted to be leaders—are inherently critical. And in actual fact, the great leaders of the past have been critically minded. Freedom of thought and speech is our most priceless national tradition, and has been the source of our continued vitality. Our military and naval heroes

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have exercised it to the full. Yet, so curious is human nature, few have learnt the wisdom of tolerating in others what they had formerly claimed for themselves. The critic become autocrat has often, in consequence, impaired his own instrument and his own legacy.

A second lesson is that to suppress criticism does not extinguish it, but merely diverts it into sub-surface channels that are far more subversive than open comment honestly expressed. The history of armies bears witness all too strongly to the prevalence of such sapping by whisper.

A true understanding of loyalty would reduce the causes of trouble. It would also curtail the artificial emphasis of this essential quality. The man who is loyal by nature, not merely from self-interest, regards it as natural among his fellow soldiers. Linked to this is the explanation why the worst obstacles to necessary change and improvement have come from what one may describe as the 'Alpha minus' class, the type of aspiring soldier who is pedantically clever but devoid of real originality. The practically minded 'Beta', or even the rather slow but essentially fair-minded 'Gamma' type is far more open to conviction once he has been confronted with hard facts that quicken his imagination.

These reflections bring us to a further need. A better understanding of the need for freedom of thought and detachment in study must be coupled

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with a new humility. A complacent satisfaction with present knowledge is the chief bar to the pursuit of knowledge. It has been so in all branches and professions. If the military is no worse than others, that is no just cause for contentment. Nor can the history of armies yield cause for self-satisfaction to any soldier who digs down into it. Moreover, those who have studied war the most cannot avoid becoming acutely conscious that the exploration of war as a scientific subject has scarcely been begun. In these conditions lack of criticism is a proof of virgin ignorance. Loyalty to truth coincides with true loyalty to the Army in compelling a new honesty in examining and facing the facts of history. And a new humility.

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CHAPTER I

SOME CONTEMPORARY SOURCES

Montecucculi.

Memorie della guerra

These memoirs of the great opponent of Turenne and Condé were first published in 1703, and, in French, in 1712.

Folard.

Nouvelles Découvertes sur la guerre dans une dissertation de Polybe (1724).

Histoire de Polybe . . . avec un commentaire (1727-30).

As a youth, Folard's interest in military science was awakened by reading Cæsar's Commentaries. He ran away from home to become a soldier, and later, in the Italian campaigns of the War of the Spanish Succession, won the Cross of St. Louis. Wounded severely at Cassano and again at Malplaquet, he began to frame his tactical theories during convalescence, and they took final form after service under Charles XII of Sweden, in whom he found a spirit akin to his own, and as prone to

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exaggeration. Folard's views caused immense controversy, and although he found some powerful supporters, he eventually died at Avignon in forlorn obscurity. After his death a précis of his writings, which had been made by Frederick's orders, was published in 1760, and helped to give his ideas a fresh lease of life. But Frederick himself provided Folard with the most apt epitaph when saying that he 'had buried diamonds in a rubbish heap'.

Feuquières.

Mémoires sur la guerre

Antoine, Marquis de Feuquières, was born in 1648, and from manhood onwards was repeatedly on active service. He played a distinguished part in Luxembourg's campaigns, but later fell foul of the incompetent Villeroi, which cost him his chance of a marshal's baton, and left him merely an observer during the War of the Spanish Succession. He devoted these years to writing his memoirs, which were published in the year of his death, 1711, and subsequently reprinted in numerous editions. They became the standard work on the theory of war. Frederick the Great was one of many famous soldiers who paid tribute to their value.

Puysegur.

Art de la Guerre par principes et par règles (1749).

A particularly clear example of the classical influence.

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Saxe. *Mes Réveries* (1757)

An English translation was published in the same year.

Mesnil-Durand. *Projet d'un ordre français en tactique* (1755)
Projet d'instruction (1775)

Bosroger. *Eléments de la guerre*

Guichard. *Mémoires militaires sur les Grecs et les Romains* (1757)

Originally educated for the Church, Guichard became an eminent student of ancient history. Promised a vacant professorship at Utrecht by the Prince of Orange, his appointment was forestalled by a local nomination, whereupon he took instead a commission in the Dutch army. After service in the campaigns in 1747 and 1748, he went back to the study of ancient history, in its military aspect. His book on the subject at once attracted the attention of Frederick the Great, who attached him to his own suite and later gave him a commission in the Prussian army under the name of 'Major Quintus Icilius'.

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Duhesme. *Essai historique sur l'infanterie légère* (1864)

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Foch. *Des Principes de la Guerre* (1903)

Hime. *Stray Military Papers* (1897)

Contains some valuable light on rates of fire and formations.

CHAPTER II

SOME CONTEMPORARY SOURCES

Guibert. *Essai général de tactique* (1770)

This famous work was translated into English (1781), German and other languages.

Défense du système de guerre moderne (1779)

A reply to the criticisms aroused by his original theory.

Bourcet. *Principes de la guerre de montagnes* (1775)

When first written this book was only circulated in manuscript copies. It was first printed in 1888, by the French Ministry of War. Two manuscript copies had been preserved in the library, one of which, the more complete, disappeared in 1871.

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The other was used as the basis of the printed edition, but happily a copy of the missing sixth part of the work was discovered in other archives in time for inclusion.

Pezay.

*Histoire des Campagnes de M.
le Maréchal de Maillebois en
Italie pendant les années 1745 et
1746 (1775)*

Lloyd.

*The History of the late war in
Germany (1781)*

Henry Lloyd was a student of philosophy who, taking up military science as a hobby, eventually became a soldier of fortune, serving in turn under the Young Pretender, the French, the Austrians, Ferdinand of Brunswick, and the Russians. After retiring from the Russian army as a major-general, he wrote a critical history of the Seven Years War, incorporating his philosophy of war, which ran through many editions and became a military 'best-seller'. During the Revolution a selection from it was printed by order of the Committee of Public Safety, and sent to all the generals of the Republic. Napoleon frequently quoted it, and borrowed from it the term 'line of operations' which he made peculiarly his own.

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Anonymous.

Observations sur l'armée française de 1792 à 1808

This remarkable analysis was made at St. Petersburg in 1808. From internal evidence it would appear to have been written by a French officer who, in opposition to Napoleon's régime, had taken refuge in Russia. Nearly a century later the manuscript was brought to notice by its publication in a journal of Russian antiquities, and was subsequently republished in book form with a preface by General Dragomirov.

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Pierron.

Comment s'est formé le génie militaire de Napoléon Ier? (1889)

Colin.

L'éducation militaire de Napoléon (1900)

La Tactique et la discipline dans les Armées de la Révolution (1902)

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Spenser Wilkinson.

The French Army before Napoleon (1915)

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The Defence of Piédmont 1742-1748 (1927)

The Rise of General Bonaparte (1930)

Pierron was the first writer to trace the influence of Bourcet and Maillebois on Napoleon's practice. His researches were carried further by Colin, who was not only the most scientific of the new French school of military historians that arose at the end of the nineteenth century, but probably the ablest military mind in the French army in 1914. His death in Macedonia while holding a relatively unimportant post was certainly, for France, a tragedy of wasted talent. Colin's studies served to guide those of Spenser Wilkinson, whose research, in turn, has supplemented them. To the facts established by Colin and Wilkinson as to Bourcet's influence I have found nothing to add, except in the way of interpretation.

Phipps

The Armies of the First French Republic. (Three volumes so far published, 1926-31.)

James

The Progress of Tactics from 1740. Unpublished.

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CHAPTER III

Among the more significant books which reveal the predominant trend of military thought between 1815 and 1914 are:

Jomini. *Traité des grandes opérations militaires* (1804)
Vie politique et militaire de Napoléon (1827)
Précis de l'art de la guerre (1836)

Clausewitz. *Vom Kriege* (1832)

Translated into French in 1849, and into English in 1873, it forms the first three volumes of Clausewitz's collected works. The remaining seven volumes comprised histories of various campaigns.

Hamley. *The Operations of War Explained and Illustrated* (1866)

Foch. *Des principes de la guerre* (1903)
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The final phase of this current of thought is set forth more fully in my own book *Foch—The Man of Orleans*, published in 1931.



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